

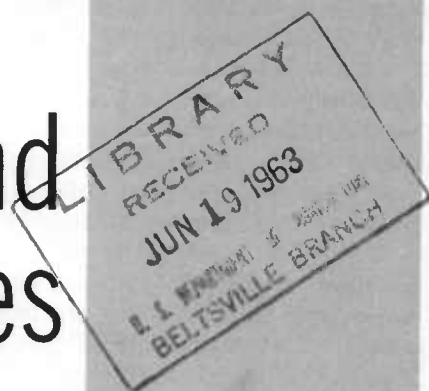
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The Texas-Oklahoma MEAT INDUSTRY

... Structure and Marketing Practices



Agricultural Economic Report No. 39

UNITED STATES DEPARTMENT OF AGRICULTURE
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July 1963

HIGHLIGHTS

With the principal exception of the retail sector, relatively few recent changes are evident in the structure of the Texas-Oklahoma (Southern Plains) meat industry. This is true particularly of the industry in Oklahoma. The most important finding of this study, however, is that substantial change in the structure of the Southern Plains meat industry likely will be required within the next several years. Pressures for change already are apparent and arise out of a variety of evolutionary developments. The basic economic forces of change include:

1. Marked change in the structure of the retail grocery industry in the Southern Plains, as elsewhere, and changes in procurement practices of retailers:

- (a) Grocery store numbers dropped 27 percent in Texas and 40 percent in Oklahoma during 1948-58.
- (b) Sales in chains and supermarkets in the Southern Plains increased from about 50 percent of total grocery store sales in 1948 to about 65 percent in 1958. Firms with 11 or more stores expanded during this period.
- (c) Voluntary and cooperative retail groups are growing rapidly and shifting to centralized buying of meat and other perishable products.
- (d) In procurement, emphasis upon specified quality and uniformity, etc., is increasing.
- (e) Large-volume retailers were receiving large quantities of meat from outside the Southern Plains in 1959.

2. Increased importance of the commercial livestock feeding industry and changes in livestock inventories in the Southern Plains:

- (a) Numbers of cattle and calves on feed almost doubled since 1950 while feedlots with 1,000 or more head capacity more than doubled.
- (b) Cattle and calf numbers on farms rose during 1930-60, but hog and sheep numbers declined.

3. Structural shifts in the meat industry at the national level reflecting changes in the number and sales of slaughtering plants, packer branch houses, and wholesalers:

- (a) Numbers of slaughtering firms are increasing and sales per plant are declining. Packers with national systems of distribution have been declining in relative importance.
- (b) Packer branch house numbers decreased about 30 percent and sales dropped about 15 percent during 1948-58, with some increase in sales per branch house.
- (c) Numbers and sales of meat wholesalers (nonslaughterers) increased dramatically between 1948 and 1954. After 1954, however, numbers and sales increased at a somewhat slower pace.

The structural and marketing practices of the Southern Plains meat industry reveal the following characteristics:

1. The Southern Plains area is surplus in the production of beef, calf, and lamb, but deficit in pork production. Although cow beef and lamb were shipped to other States in 1959, fed beef and pork items were shipped in from other States.

2. The slaughtering or packing industry is composed primarily of small- and medium-volume, nonfederally inspected firms. Numbers of slaughtering plants increased during 1948-58 and average sales volume per plant decreased.

3. Slaughter in the area is not highly specialized as two-thirds of the plants slaughtered three or more species in 1959.

4. Packer branch house numbers decreased from 1948 to 1958, while average sales volume per branch increased substantially in contrast to a smaller increase for the U. S.

5. Wholesaling firms (nonslaughterers) doubled in number and size from 1948 to 1954, but no substantial changes were noted after 1954.

6. A few specialized processing firms are located in the area. Their relative importance appears to be increasing in Oklahoma although decreasing in Texas.

Adjustments that may occur as a result of forces now at work in the Southern Plains livestock and meat industry include:

1. More specialization and increases in size of slaughtering establishments to supply large-volume retailers with the required volume and quality of meat products at competitive costs.

2. Additional federally inspected slaughtering facilities if the current growth rate of the cattle feeding industry in the Southern Plains is maintained.

3. A downward adjustment in numbers of wholesaling firms with a simultaneous increase in size of firms to supply the increasing numbers of large-volume retailers.

4. Further decreases in packer branch house numbers, but increases in size, reflecting increased emphasis on pork and other cured products.

THE TEXAS-OKLAHOMA MEAT INDUSTRY

Structure and Marketing Practices

By Raymond A. Dietrich, Willard F. Williams, and Jarvis E. Miller 1/

INTRODUCTION

The distribution of meat and meat products and the structure of the meat industry in the United States are undergoing continual change. 2/ Population and income growth, rapidly growing urban centers, expanding large volume retailers, modern mechanization, shifts in location of production and slaughter, and growth in commercial cattle feeding have generated many of the structural changes that have appeared in the meat industry. Mass buying of meat on a rigid specification basis by retail firms and the widespread use of Federal meat grade standards also have encouraged adjustments at all levels in the meat industry. These and other factors, including shifts in population to the West and to large metropolitan and industrial areas have been accompanied by changes in number, types, and business operations of packers and wholesalers, and alterations in the types of livestock being produced.

Changes in the meat industry structure are many and varied. For instance, national packers, including their branch houses, are declining in importance. The percentage of meat industry sales accounted for by the nine largest packers decreased from 62 percent in 1950 to 53 percent in 1959. These percentages represent total sales. Meat sales are a smaller proportion of total sales for the large packer than for the smaller packer. 3/ Independent packers and wholesale meat distributors, at the same time increased their share of the market. Specialization in slaughtering, processing, and distribution is becoming more pronounced at the national level. Large diversified firms are being replaced by smaller, more specialized operations. Cattle feeding has become highly commercialized and feeders have become more cognizant of the quality demands of large volume retailing firms. Packing firms, including some with national systems of distribution, have located near the areas of concentrated livestock production and feeding in an attempt to decrease procurement costs.

1/ Mr. Dietrich is an Agricultural Economist, Economic Research Service, Marketing Economics Division, U. S. Department of Agriculture; Mr. Williams is a Professor, Department of Agricultural Economics, Oklahoma State University; and Mr. Miller is an Associate Professor, Department of Agricultural Economics and Rural Sociology, Texas Agricultural and Mechanical College.

2/ Williams, W. F. Wholesale Meat Distribution In the San Francisco Bay Area. U. S. Dept. Agr. Mkt. Res. Rpt. 165. April 1959.

Dietrich, R. A., and Williams, W. F. Meat Distribution in the Los Angeles Area. U. S. Dept. Agr. Mkt. Res. Rpt. 347. July 1959.

Butz, D. E. and Baker, G. L., Jr. The Changing Structure of the Meat Economy. Harvard University, Graduate School of Business Administration, Division of Research. Boston, 1960.

3/ American Meat Institute. Financial Facts About the Meat Industry. Chicago, Ill., July 1962.

Changes at the national level have precipitated changes in Texas and Oklahoma. ^{4/} Some national packers have constructed additional plants in the Southern Plains; others have ceased operations. Some independent packers have enlarged and renovated existing slaughtering facilities to meet increasing demands. An increasing industrial development and a rapidly growing population in the North Texas and Gulf Coast areas have been accompanied by increases in numbers and size of large-volume retail organizations which market a high quality product. The Southern Plains area traditionally has produced large volumes of feeder cattle and calves and is now producing large quantities of feed grains and sorghums. Cattle feeding has expanded rapidly since the mid 1950's and additional expansion is anticipated.

The meat industry of the Southern Plains is faced with severe competition from other areas for markets within and outside the region.

Objectives of This Study

This study represents the initial phase of a continuing research program. The larger program is designed to determine (1) the structure of the Southern Plains livestock and meat industry, (2) the competitive potential of the industry in this area relative to other areas, (3) the impacts and effects of basic economic forces such as population, consumer income and technology on market structure and on the behavior of meat industry firms in the region, (4) effects of adjustments in market structure upon operational and pricing efficiency, and (5) kinds and types of additional adjustments that might be made by the Southern Plains meat industry to improve performance and competitive potentials.

Little information currently is available on the marketing of livestock or meat in Texas and Oklahoma. As an initial effort, therefore, this study is designed to (1) reveal structural characteristics of the marketing system for meat, (2) examine recent changes in basic economic forces such as population, income and adjustments at the retail and farm level and accompanying changes in the Southern Plains meat industry, (3) evaluate recent adjustments in market structure and practices, (4) develop preliminary recommendations with respect to adjustments in market structure that appear consistent with improvements in market performance, and (5) provide data and suggestions on needed areas for additional research. Emphasis in this initial study is placed primarily upon current market structure and historical changes in structure.

Data Collecting Procedure

In order to evaluate the current structure of the meat industry in the Southern Plains, data were collected on volumes of meat handled and procurement and selling practices during 1959.

In Oklahoma, data were obtained from all packers, wholesale meat distributors, and retail food chains. In Texas, data were obtained from all packers, wholesale meat distributors, and retail food chains in the Dallas-Fort Worth, Houston, and San Antonio metropolitan areas. In the remaining areas of Texas, data were collected from packers and retail food chains on a sample basis.

Historical analyses were made from Census and other data.

^{4/} Subsequent references to Texas and Oklahoma as a unit may be denoted by "Southern Plains."

BASIC FORCES AFFECTING MARKET STRUCTURE AND HISTORICAL TRENDS

The development of the meatpacking industry in Texas began in the 1890's. Texas, however, did not gain national prominence in the meat industry until Swift and Armour erected plants at Fort Worth in 1902. ^{5/} Meatpacking on a commercial scale in Oklahoma was initiated with establishment of plants in Oklahoma City by Morris in 1909, and by Sulzberger and Schwarzschild in 1911. ^{6/}

Structural changes in the Southern Plains livestock and meat economy have been the result of many forces -- both economic and social in nature. Some of these forces include changes in population, per capita income, livestock production and slaughter, meat consumption, and changes in the livestock and meat industry.

Population and Income

Changes in population and in consumer incomes are two important forces affecting the structure of the marketing system for meat at the retail level, and subsequently the wholesale distribution level. The Southern Plains population accounted for 6.7 percent of the United States total in 1960 as compared with 6.6 percent in 1950. During this period population increased about 20 percent in the Southern Plains and about 18 percent in the U. S. The larger cities in Texas have been responsible for most of the population growth in the Southern Plains.

Population in Texas, which is 4 times greater than that of Oklahoma, rose from 3 million in 1900 to 9.6 million in 1960 (fig. 1). The population expanded most rapidly in Texas from 1940 to 1960 when numbers increased by more than 49 percent. In contrast, the population in Oklahoma reached a peak of 2.4 million in 1930 and has remained at about this level through 1960 (fig. 1). Since 1955, however, population growth in Oklahoma has averaged about 1.1 percent per year.

Consumption of some types of meat, principally beef, generally rises with increases in real incomes of consumers. Pork consumption, in contrast, generally declines, relative to beef. Personal income has shown significant gains in Texas and Oklahoma from 1929 to 1960 both in total and per capita (table 1). Total personal income adjusted for changes in prices increased 166 percent in Texas and 99 percent in Oklahoma. The larger increase for Texas is attributable to a faster-growing population. There is little difference between the two States in rate of growth of per capita personal income, which was slightly higher in Texas than in Oklahoma throughout the 1929-60 period (table 1). However, since 1940, per capita personal incomes have increased more rapidly in Oklahoma than in Texas.

Rising per capita personal income and an increasing population in the Southern Plains imply an increasing consumption of meat and meat products in that area. Although personal income has increased in both States, total meat consumption has not increased as greatly in Oklahoma as in Texas, where population moved up at a sharper rate.

^{5/} Littleton, Terrel W. The Meat Packing Industry With Special Reference to Texas. Thesis, University of Texas, p. 45. August 1940.

^{6/} Swem, Edward R. Meat Packing Grows Up. National Provisioner, p. 76. January 1952.

Table 1.--Personal and per capita personal income, Texas and Oklahoma, 1929-1960 1/

Year	Personal income		Per capita personal income	
	Texas	Oklahoma	Texas	Oklahoma
	Million dollars	Million dollars	Dollars	Dollars
1929.....	2,752	1,077	478	454
1940.....	2,776	867	432	373
1950.....	10,375	2,514	1,340	1,133
1960.....	18,508	4,312	1,924	1,848

1/ Figures are unadjusted for changes in price levels.

Source: U. S. Department of Commerce, Personal Income by States.

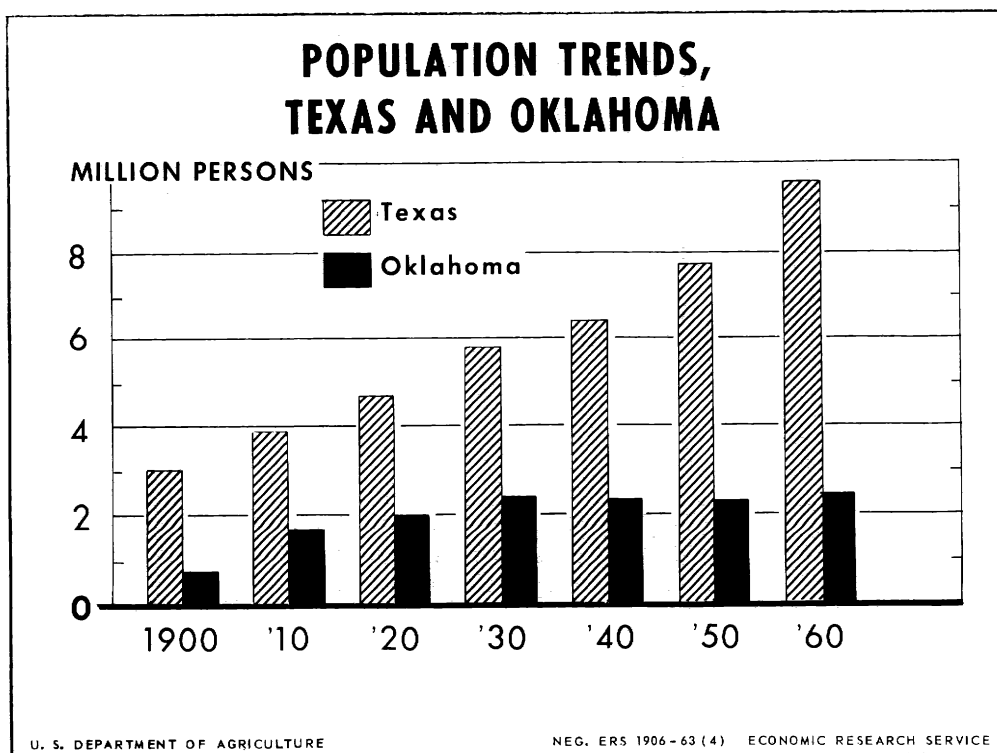


Figure 1

Livestock Inventories, Production, Slaughter, and Consumption

Livestock Inventories

Livestock inventory data for 1930-60 indicate (1) some increase for both States in numbers of cattle and calves on farms, (2) reductions throughout the region in hog inventories, and (3) some decline for Texas in sheep numbers but slight increases for Oklahoma (figs. 2 and 3).

Cattle and calf inventories are considerably higher in Texas than in Oklahoma. The increase has been steady and consistent in Oklahoma during 1930-60 while in Texas, numbers tended downward during the latter half of the period. Historically, Texas and Oklahoma have not been important as hog-producing States. There is little indication that this situation will change in the near future (figs. 2 and 3). Sheep production in Oklahoma is low and the prospects are that this pattern will continue. Although sheep numbers have declined sharply in Texas since 1943, Texas has been and remains the leading sheep-producing State in the country.

Sheep and lamb slaughter is concentrated among a relatively few firms and most of this product is shipped to buyers in other States.

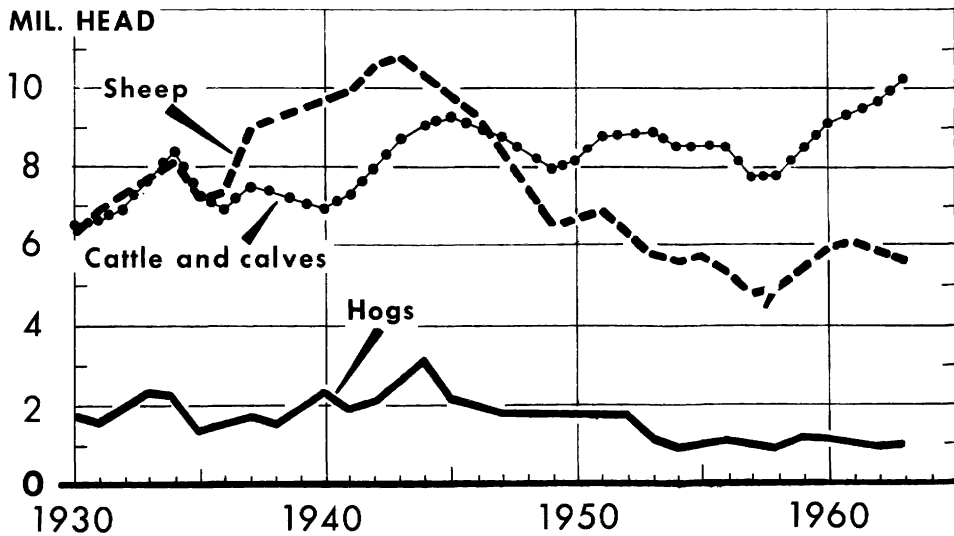
Cattle and Calf Production, Slaughter, and Consumption

Greater marketings for slaughter relative to commercial slaughter indicates that surplus marketings are shipped out-of-State for slaughter. This was the case for cattle and calves in Oklahoma, and calves (and sometimes cattle) in Texas during the 1947-60 period (figs. 4 and 5). Consumption of beef and calf in both States was generally below commercial slaughter with the exception of short periods during 1950-52 and again in 1958-60. 7/

Movements of cattle and calves to slaughter in a production area like the Southern Plains are dependent to a large degree on range conditions and on present and anticipated cattle prices. During periods of drought as occurred in the Southern Plains during 1952-56, numbers of cattle and calves moving to slaughter were relatively heavy compared to 1957-59 when range conditions and the outlook for cattle and calf prices encouraged livestock producers to increase livestock holdings. When livestock inventories are being increased, marketings for slaughter and commercial slaughter decline, and cattle prices move upwards. But when relatively large numbers of cattle move to market, the opposite occurs. In the mid-fifties, cattle prices decreased at the farm level, beef prices declined at the wholesale level relative to earlier years, and consumption of beef increased, encouraging packers to expand their slaughter operations. Cattle slaughter in Texas increased as additional slaughter animals were acquired from out-of-state sources (fig. 4).

7/ Williams, W. F. Marketing Potentials for Feedlot Cattle in Oklahoma and Texas. Okla. Agr. Expt. Sta. Processed Series P-426, pp. 31-34. Sept. 1962. Consumption was estimated by using the U. S. Department of Agriculture's 1955 Food Consumption Survey data and estimates obtained in this study. Functional relationships from Household Consumption survey data on the South were obtained between purchased consumption per capita and per capita income. These were adjusted to the 1960 per capita disposable income levels in Oklahoma and Texas and for seasonality, shrinkage between the farm and wholesale levels, and other factors. Survey data from this study then were applied to estimated consumption by classes of meat. Consumption data are in terms of primary (wholesale) distribution weight.

TEXAS LIVESTOCK INVENTORIES, JANUARY 1

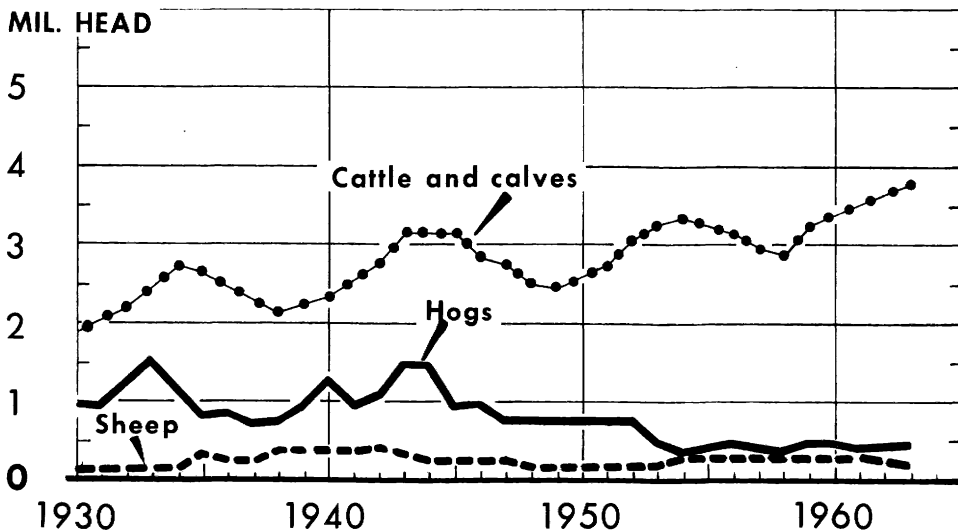


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Figure 2

OKLAHOMA LIVESTOCK INVENTORIES, JANUARY 1



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Figure 3

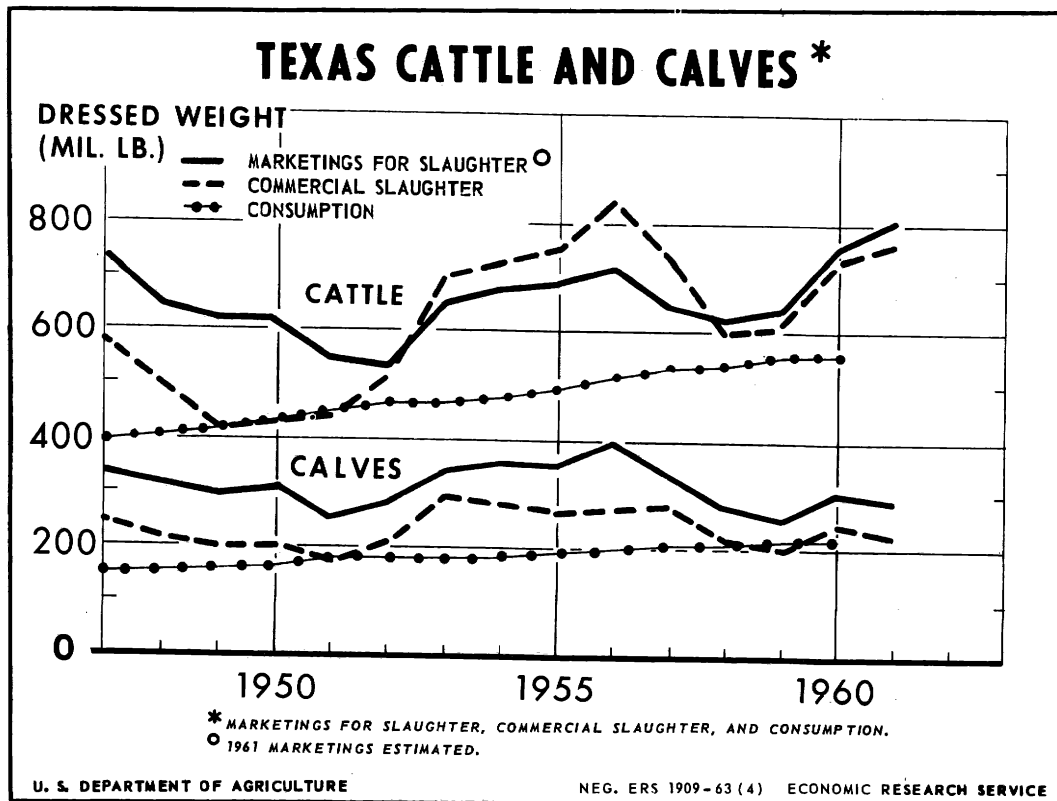


Figure 4

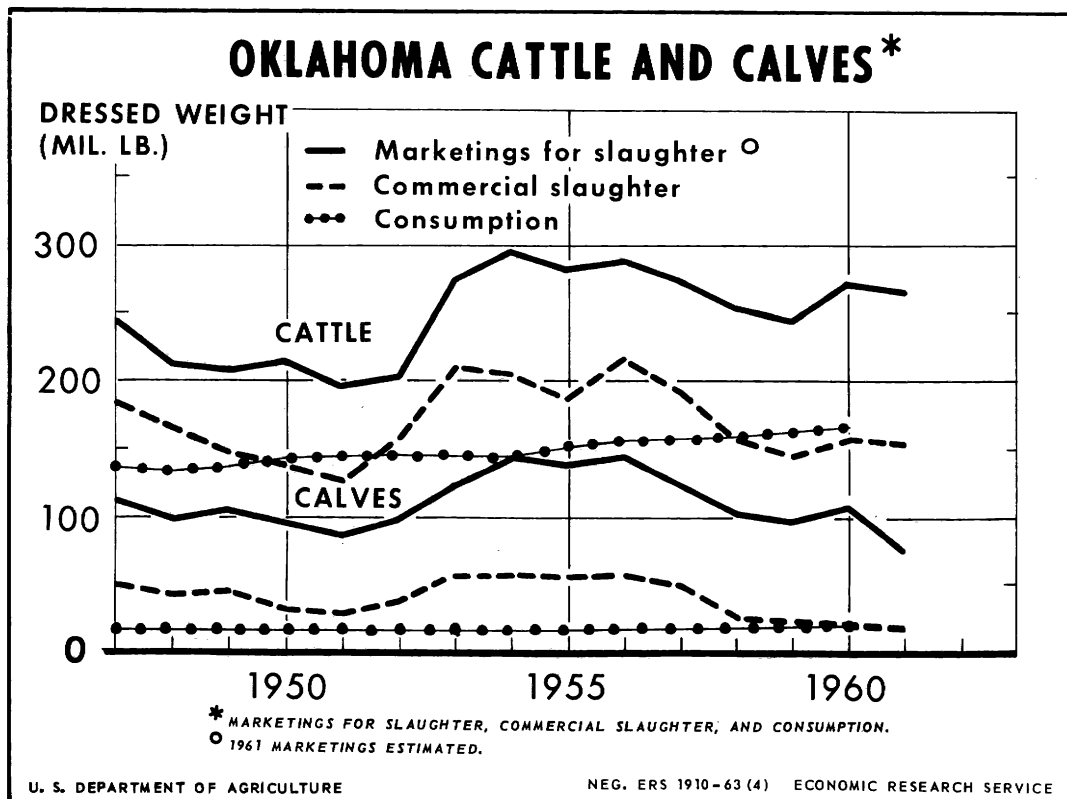


Figure 5

Pork Production, Slaughter, and Consumption

Texas and Oklahoma differed with respect to their pork operations during the period 1947-60 (figs. 6 and 7). Texas was consistently in a large deficit position relative to pork consumption and commercial slaughter. Commercial slaughter has varied more in Oklahoma than in Texas. At times Oklahoma has produced more dressed pork than was consumed within the State. Since 1957, however, Oklahoma has received substantial in-shipments of dressed pork. Pork consumption is rising in the Southern Plains and in-shipments of dressed pork apparently will increase even more in the future.

Changes in Cattle Feeding

The cattle feeding industry, historically, has been concentrated heavily in the Corn Belt States. Feedlots, however, have expanded sharply in California, Colorado and other areas since the early 1950's (table 2). Cattle feeding also increased at a fairly rapid, but steady pace in the Northern Plains States during 1950-60. Large-volume commercial cattle feeding in the Southern Plains did not increase substantially until after the 1955-56 drought. Numbers of cattle on feed almost quadrupled in California during 1950-62 and approximately doubled in the Southern Plains, the Northern Plains, and Colorado.

Production of fed cattle has been growing at a rapid pace in the Southern Plains since 1957-58. Feed, feeder cattle and other resources in the region are sufficient for production of several times as many fed cattle as were marketed in 1961. 8/ Abundant and increasing supplies of feed grain, development of feeding systems requiring little roughage, and a relatively long calving season providing a year around supply of feeder are distinct advantages.

Table 2.--Cattle and calves on feed, January 1, selected areas,
Oklahoma and Texas, 1950-62

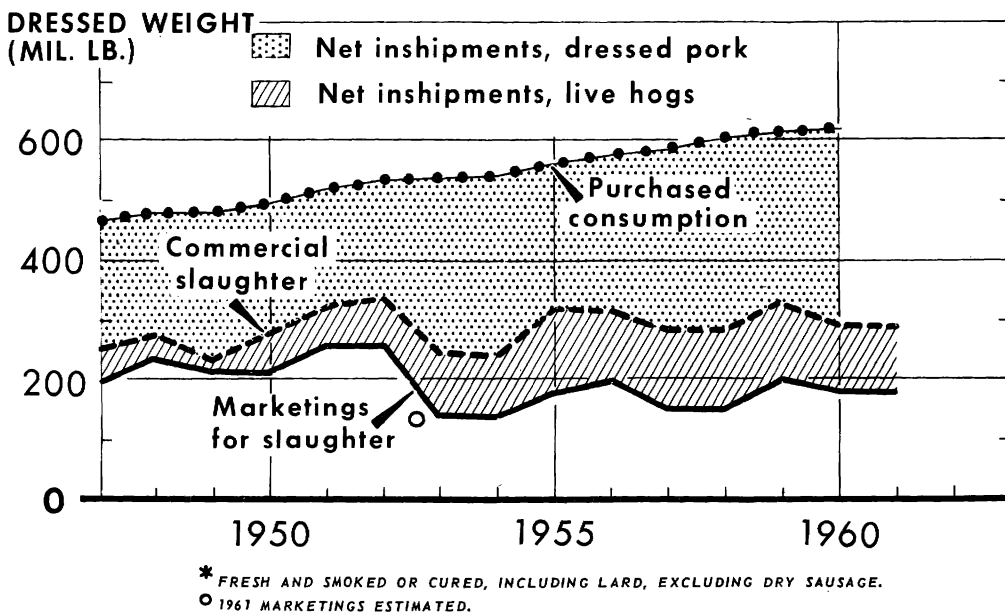
Item	1950	1960	1962	Percentage change 1950-62
	head	head	head	Percent
Southern Plains.....	216	317	409	89.4
Texas.....	161	248	323	100.6
Oklahoma.....	55	69	86	56.4
North Central Region 1/:	3,376	4,848	5,254	55.6
Northern Plains 2/....	657	1,037	1,310	99.4
Other North Central...	2,719	3,811	3,944	45.1
California.....	196	665	776	295.9
Colorado.....	206	404	397	92.7

1/ Includes Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, and Kansas.

2/ Includes North Dakota, South Dakota, and Nebraska.

8/ Williams, Willard F. Marketing Potentials for Fed Beef in Oklahoma and Texas. Okla. Agr. Expt. Sta. Processed Series P-426. Sept., 1962.

TEXAS PURCHASED PORK CONSUMPTION,* HOG SLAUGHTER AND MARKETINGS

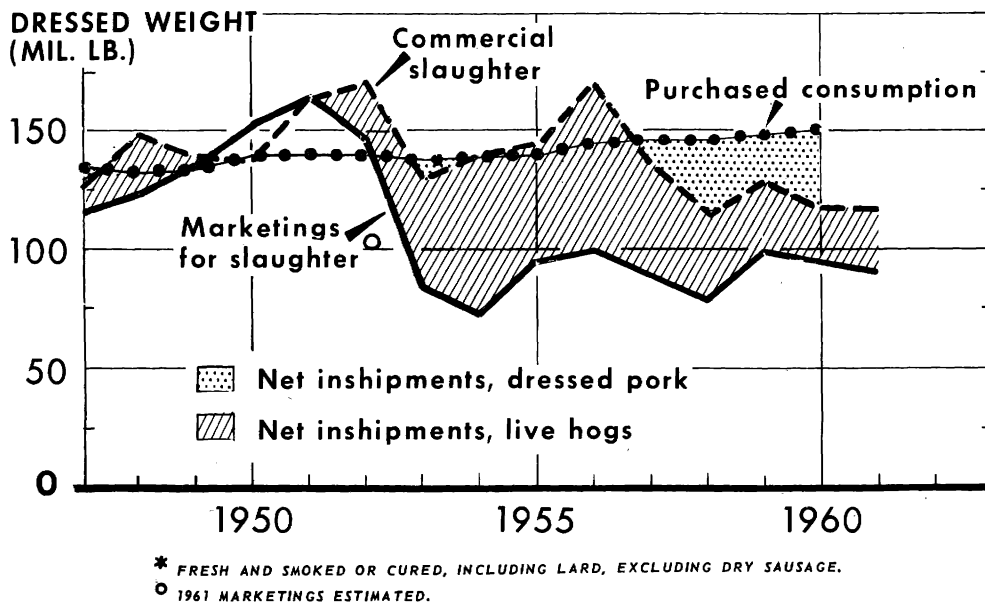


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Figure 6

OKLAHOMA PURCHASED PORK CONSUMPTION,* HOG SLAUGHTER AND MARKETINGS



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Figure 7

Fed cattle production in Oklahoma is about equal to total fed beef consumption while in Texas production by a more rapidly growing fed cattle industry may soon overtake consumption (figs. 8 and 9). Feedlots with 1,000 or more head capacity have doubled in Texas from 1956 to 1961 (table 3). Numbers of feedlots in Oklahoma with 1,000 or more head capacity were estimated to have increased from 6 to 26 during 1956-61. These increases are especially significant since feedlots with 1,000 or more head capacity generally have accounted for 75 percent or more of the cattle fed in Texas and Oklahoma. Interviews with feedlot operators and producers in Oklahoma reveal that a substantial volume of Oklahoma marketings is shipped to Texas. 9/

Table 3.--Texas and Oklahoma feedlots: Number with 1,000 or more head capacity, January 1, 1956-61

Year	:	Texas <u>1/</u>	:	Oklahoma <u>2/</u>
	:	<u>Number</u>	:	<u>Number</u>
1956.....	:	63	:	6
1957.....	:	71	:	NA
1958.....	:	81	:	NA
1959.....	:	94	:	NA
1960.....	:	102	:	NA
1961.....	:	124	:	26

1/ "Texas Cattle on Feed," U. S. Dept. Agr., Crop Reporting Service, Austin, Tex., October, 1961.

2/ Data estimated from current study of feedlots.

NA - Not available.

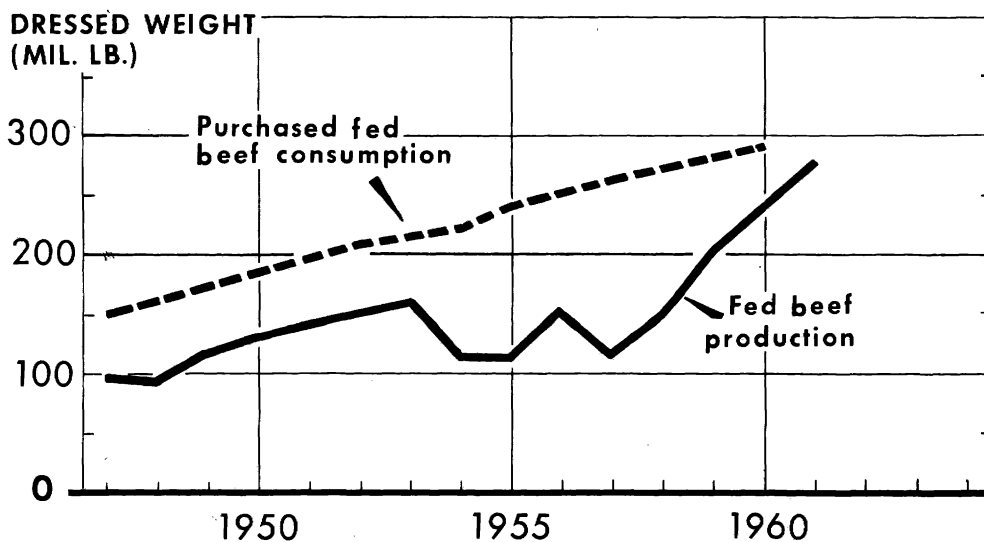
In-Out Shipments of Beef

Although substantial quantities of beef were shipped by both Texas and Oklahoma in 1959 to other states, large volumes of beef also were shipped into the Southern Plains. Out-shipments consisted mostly of low quality beef while fed beef accounted for most of the in-shipments. On balance, Texas had a small net surplus of beef while net in-shipments were required for Oklahoma (table 4). Both states were net exporters of calf but most of the Oklahoma surplus moved into Texas.

In-shipments of dressed fed beef were estimated at 70 million pounds for Texas and 30 million pounds for Oklahoma. These quantities represented about one-fourth of the estimated fed beef consumption in Texas and one-third in Oklahoma. These data imply that potentials arising from replacement of in-shipments may be greater for the immediate future than those which may arise from population and income increases within the region.

9/ Williams, W. F. and McDowell, James. Characteristics and Growth of Cattle Feedlot Operations In Oklahoma. Okla. Agr. Expt. Sta. Processed Series P-418. June 1962.

PRODUCTION AND PURCHASED CONSUMPTION OF FED BEEF, TEXAS

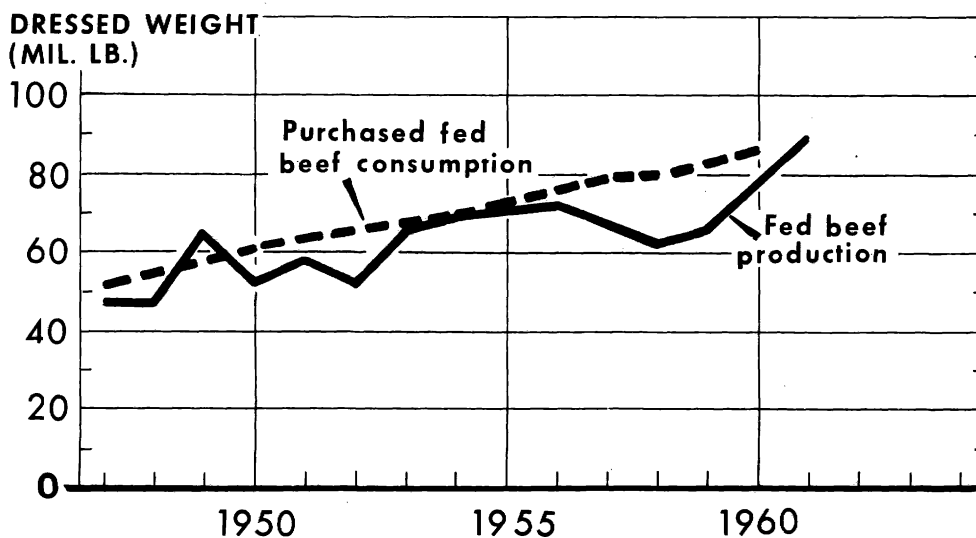


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Figure 8

PRODUCTION AND PURCHASED CONSUMPTION OF FED BEEF, OKLAHOMA



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Figure 9

Table 4.--Texas and Oklahoma: Beef and calf in-out balance and consumption, 1959

Item	Texas		Oklahoma	
	Beef	Calf	Beef	Calf
	1,000 <u>pounds</u>	1,000 <u>pounds</u>	1,000 <u>pounds</u>	1,000 <u>pounds</u>
Dressed production <u>1</u> /....:	646,910	219,796	147,568	24,887
In-shipments <u>2</u> /.....:	121,060	11,816	57,641	1,347
Total pork available....:	747,970	231,612	205,209	26,234
Out-shipments <u>3</u> /.....:	217,785	19,150	42,628	4,108
State consumption.....:	550,185	212,462	162,581	22,126
Out-shipments minus in-shipments.....:	96,725	7,334	-15,013	2,761

1/ Computed from slaughter data obtained from packers or slaughterers.

2/ Includes total in-shipments by all types of meatpackers, wholesale meat distributors, and retailers. In-shipments include volumes shipped-in in fresh form or as sausage items.

3/ Includes out-shipments of beef and calf by packers, wholesale meat distributors, and retailers in either fresh form or as sausage items.

The data suggest the nature and intensity of competition faced by Southern Plains feedlot producers and meatpackers. Growth and development of feedlot marketings within the region will depend upon many factors including (1) relative costs or efficiency and prices, (2) procurement costs of retailers in dealing with a large number of small packers as compared with a smaller number of large-volume suppliers in the North Central region, (3) differences among suppliers with respect to variations in weight, quality, or handling practices, (4) extent of variation in volume of local production through the year, and from year-to-year, (5) the level of confidence developed by retailers in the ability of the fed cattle industry in the Southern Plains to withstand drought and (6) feed grain programs of the Federal government.

In-Out Shipments of Pork

Massive deficits of pork are indicated for the Southern Plains (table 5). In-shipments in 1959 represented 57 percent of total consumption in Texas and 34 percent in Oklahoma. Local hog production is higher in Oklahoma than Texas relative to consumption. In addition, a relatively larger number of live hogs are shipped into Oklahoma for slaughter. Several large-volume pork processors in Texas and many of the retail chains in that state depend heavily upon in-shipments of pork. Direct or "drop" shipments of meat products (especially beef and pork) from packers in the North Central region to both large and small retailers have become more important in recent years. These shipments frequently are made by rail or by large commercial trucks and consigned directly to individual firms.

Table 5.--Texas and Oklahoma: Pork in-out balance and consumption, 1959

Item	Texas			Oklahoma		
	Fresh pork	Smoked and cured pork	Sausage items <u>1/</u>	Fresh pork	Smoked and cured pork	Sausage items <u>1/</u>
	<u>1,000 pounds</u>	<u>1,000 pounds</u>	<u>1,000 pounds</u>	<u>1,000 pounds</u>	<u>1,000 pounds</u>	<u>1,000 pounds</u>
Dressed production <u>2/</u>	342,267	189,562	81,011	127,418	68,654	30,652
In-shipments.....	222,904	159,755	23,583	63,899	38,275	8,972
Total pork available.....	565,171	349,317	104,594	191,317	106,929	39,624
Transferred to processing <u>3/</u> ..	270,573	--	--	99,306	--	--
Out-shipments <u>3/</u>	26,284	12,068	13,176	27,234	24,927	6,578
Total transferred or shipped out.....	296,857	12,068	13,176	126,540	24,927	6,578
State consumption.....	268,314	337,249	91,418	64,777	82,002	33,046
Out-shipments minus in- shipments.....	-196,620	-147,687	-10,407	-36,665	-13,348	-2,394

1/ Sausage items are defined to include only the pork in sausage and variety meats.

2/ Dressed fresh pork volumes were computed from slaughter data obtained from packers. Smoked and cured production and sausage items include only those volumes of fresh pork transferred to processing for within plant operations by packers and wholesale meat distributors in Texas and Oklahoma.

3/ Includes operations of packers, wholesale meat distributors, and retailers.

In-Out Shipments of Lamb

Large numbers of live sheep and lambs are shipped out of Texas annually. Nevertheless, Texas meat packers and distributors shipped about 70 percent of their total 1959 dressed supply of lamb and mutton to buyers in other states (table 6). Lamb consumption in Oklahoma, although small, far exceeds Oklahoma lamb slaughter.

Table 6.--Texas and Oklahoma: Lamb and mutton in-out balance, 1959

Item	Texas	Oklahoma
	1,000 <u>pounds</u>	1,000 <u>pounds</u>
Dressed production <u>1/</u>	44,150	340
In-shipments <u>2/</u>	13,826	2,721
Total pork available.....	57,976	3,061
Out-shipments <u>3/</u>	40,280	494
State consumption.....	17,696	2,567
Out-shipments minus in-shipments....	26,450	-2,227

1/ Computed from slaughter data obtained from packers or slaughters.

2/ Includes total in-shipments by all types of meat packers, wholesale meat distributors and retailers.

3/ Includes total out-shipments by all types of meat packers, wholesale meat distributors, and retailers in either fresh form or as sausage and processed items.

Historical Changes in the Meat Industry

Organizational and structural changes have been very much in evidence in the meatpacking, processing and wholesaling industry since the 1940's. 10/ Meat sales by packers with national systems of distribution declined relatively while those of independent packers increased. The proportion of meat distributed directly from packers to final outlets has increased from 47 percent in 1939 to 64 percent in 1954. 11/ Independent wholesale meat distributors who cater to the retail and restaurant trade have expanded rapidly in numbers and sales. Many small independent retailers have been replaced by large volume retailers who have precipitated many of the structural changes in the livestock and meat sector of the economy.

The Meat Packer Level

Significant changes have taken place at the packer level in number of establishments, production workers, and sales volume. The number of packing plants in the United States increased 30 percent during 1947-58 (table 7). Increases are indicated

10/ Williams, W. F. Structural Changes in the Meat Wholesaling Industry. Jour. Farm Econ. XL, No. 2, May 1958.

11/ Wilson, D. L., Pence, Betty S., and Phillips, V. B. Marketing Costs and Margins for Livestock and Meats. U. S. Dept. Agr. Mktg. Res. Rpt. 418, Nov. 1960, p. 22.

Table 7.--Meatpacking plants: Number of establishments and production workers per plant by census regions, and Texas and Oklahoma, for 1958 and percentage changes 1947-58 and 1954-58

Region and State	Number of plants				Production workers per plant		
	1958	Percentage change		1958	Percentage change		
		1947-58	1954-58		1947-58	1954-58	
	Number	Percent	Percent	Percent	Number	Percent	Percent
South Central.....	546	19.5	67.0	36.2	35	-34.0	-19.6
East South Central.....	205	7.3	86.4	44.4	38	-22.4	-22.4
West South Central <u>1</u> /...	341	12.2	57.1	31.7	33	-40.0	-26.7
Texas.....	198	7.1	72.2	29.4	38	-44.9	-25.5
Oklahoma.....	49	1.7	14.0	32.4	40	-40.3	-39.4
North Central.....	999	35.7	28.1	17.1	91	-33.1	-26.0
East North Central.....	675	24.1	24.5	15.4	54	-37.9	-31.6
West North Central.....	324	11.6	36.1	20.9	169	-32.1	-22.8
North Atlantic.....	461	16.4	3.6	5.7	31	-24.4	-18.4
South Atlantic.....	365	13.0	58.0	27.6	34	-17.1	-19.0
Mountain.....	181	6.5	26.6	23.1	29	-14.7	-19.4
Pacific.....	249	8.9	9.7	2.0	35	-27.1	-20.5
United States.....	2,801	100.0	30.1	18.3	54	-30.8	-23.9

^{1/} The West South Central Region includes Texas, Oklahoma, Arkansas and Louisiana.

Source: Census of Manufactures, Industry Statistics.

for all regions of the United States during this period. Numbers increased most in the South Central and South Atlantic Regions during this period. The number of establishments increased 72 percent in Texas as compared to 14 percent in Oklahoma.

The average number of production workers per plant have trended sharply downward in all areas, but reductions for the Southern Plains during 1947-58 were significantly larger than for most other areas (table 7). Reductions averaged 40 percent for Oklahoma and Texas during this period compared with 31 percent for the United States. Factors contributing to the smaller number of workers per plant are increased use of mechanization by many of the smaller more modernized plants, and an increase in the number of independent packers relative to large national packers. Value added per production worker, an index reflecting, among other things, the amount of processing and mechanization, almost doubled in the United States from 1947 to 1958. During this same period, value added per production worker increased 150 percent in Oklahoma compared to 54 percent in Texas. This relatively large increase in Oklahoma stems principally from the greater increase in fabrication and processing performed by many plants in that state. Value of shipment per production worker, at the same time, increased more than one-third during 1954-58 in the United States and also Texas and Oklahoma. 12/

Total sales volume of packing plants increased 12 percent in Texas, but decreased 6 percent in Oklahoma from 1954 to 1958 (table 8). Packer sales in the United States increased less than 3 percent in 1954-58. Most of this small increase is attributable to a decline in the East North Central Region and to relatively small increases in the West North Central and Pacific Regions. Most other areas showed substantial increases in packer sales.

Southern Plains plant numbers increased sharply and total sales volume declined during 1954-58. After adjustment by the BLS index of wholesale meat and meat product prices, sales per plant in Oklahoma dropped 29 percent compared to a 14 percent decline in Texas (table 8). This was about equal to the national average reduction. Sales per plant decreased in all regions during this period. Increases in total sales volume of packers in Texas, as well as other areas where sales per plant decreased, indicates that plants smaller than average in size are increasing relatively faster than are the larger slaughtering plants.

Prepared Meat Plants 13/

The number of prepared meat plants increased in the Southern Plains and in most other areas during 1947-58 (table 9). The single exception is the East South Central Region where prepared meat plant numbers dropped 28 percent. The percentage increase for Oklahoma was large during this period, but even after the change in 1958, Oklahoma had only 13 prepared meat plants. Plant numbers in Texas were 38 in 1947 and 49 in 1958, but dropped slightly during the last 4 years of this period.

The average number of production workers per prepared meat plant decreased in all regions except the North Atlantic, Mountain and Pacific Regions during 1948-58

12/ Value added per production worker and value of shipment per production worker were not adjusted for price increases because of the various items included in the manufacturing process.

13/ Firms which are engaged principally in manufacturing sausage items and cured products. These operators are generally non-slaughters and sell some fresh meat.

Table 8.--Meatpacking plants: Total and average sales by census regions, and Texas and Oklahoma, for 1958, and percentage changes 1954-58

Region and State	Sales			Sales per plant	
	1958		Percentage change, 1954-58 <u>1/</u>	1958	Percentage change 1954-58 <u>1/</u>
	Actual	Distribution			
	<u>1,000 dollars</u>	<u>Percent</u>	<u>Percent</u>	<u>1,000 dollars</u>	<u>Percent</u>
South Central.....	1,265,087	10.6	17.4	2,317	-13.8
East South Central...	540,916	4.5	26.0	2,639	-12.7
West South Central...	724,171	6.1	11.7	2,124	-15.1
Texas.....	499,432	4.2	11.6	2,925	-13.8
Oklahoma.....	135,135	1.1	-6.2	3,892	-29.1
North Central.....	7,169,147	59.9	-1.5	7,176	-15.9
East North Central...	2,825,201	23.6	-5.9	4,185	-18.5
West North Central...	4,343,946	36.3	1.7	13,407	-15.9
North Atlantic.....	1,249,262	10.4	2.8	2,710	-2.8
South Atlantic.....	704,228	5.9	12.1	1,929	-12.2
Mountain.....	536,075	4.5	22.7	2,962	-.3
Pacific.....	1,038,474	8.7	.2	4,171	-1.7
United States.....	11,962,273	100.0	2.5	4,271	-13.4

1/ Sales adjusted by the BLS index of wholesale prices of meat and meat products, 1947-49 = 100.

Source: Census of Manufactures, Industry Statistics.

(table 9). Workers per plant, in Oklahoma, dropped from 20 in 1947 to 11 in 1958 and in Texas from 24 to 17 during this period. Since 1954 production workers per plant decreased slightly in Texas but remained unchanged in Oklahoma.

Although most regions showed a decrease in numbers of production workers per prepared meat plant during the period 1947-58 and some regions showed a further decrease during 1954-58, substantial increases in total sales volume are indicated for all major regions of the United States during 1954-58 (table 10). Plants in Oklahoma increased total sales volume by more than 50 percent but sales of processors in Texas dropped nearly 15 percent. This would suggest that prepared meat plants are increasing in importance in Oklahoma, but decreasing in Texas. The reductions in Texas may reflect increasing volumes of prepared meat in-shipments from Corn Belt plants.

Average adjusted sales per prepared meat plant increased about 9 percent for the United States during 1954-58 (table 10). The most significant increase in sales per plant took place in the Mountain Region where total sales more than doubled and

Table 9.--Meat processing (prepared meat) plants: Number of establishments and production workers per plant, by census regions, Texas and Oklahoma, for 1958, and percentage changes 1947-58 and 1954-58

Region and State	Plants				Production workers per plant			
	1958	Percentage change			1958	Percentage change		
		1947-58		1954-58		1947-58		1954-58
		Number	Percent	Percent		Percent	Number	Percent
South Central.....	133	8.9	-5.0	1.5	15	-11.1	0.0	
East South Central....	49	3.3	-27.9	6.5	12	-25.0	0.0	
West South Central....	84	5.6	16.7	-1.2	17	-22.7	6.3	
Texas.....	49	3.3	28.9	-4.0	17	-29.2	-5.6	
Oklahoma.....	13	.9	85.7	8.3	11	-45.0	0.0	
North Central.....	478	32.0	32.8	16.3	29	-32.6	-17.1	
East North Central....	382	25.6	34.5	18.3	30	-31.8	-19.9	
West North Central....	96	6.4	26.3	9.1	28	-26.3	3.7	
North Atlantic.....	511	34.2	8.5	12.1	24	9.1	0.0	
South Atlantic.....	162	10.8	19.1	14.9	22	-8.4	0.0	
Mountain.....	36	2.4	89.5	20.0	18	28.6	63.6	
Pacific.....	174	11.7	26.1	18.4	23	27.8	9.5	
United States.....	1494	100.0	18.2	13.5	24	-11.2	-7.7	

Source: Census of Manufactures, Industry Statistics.

Table 10.--Meat processing (prepared meat) plants: Total and average sales by census regions, Texas and Oklahoma, for 1958, and percentage changes 1947-58 and 1954-58

Region and State	Sales			Sales per plant	
	1958		Percentage change 1954-58 <u>1/</u>	1958	Percentage change 1954-58 <u>1/</u>
	Actual	Distribution			
	1/ :	:			
	<u>1,000 dollars</u>	<u>Percent</u>	<u>Percent</u>	<u>1,000 dollars</u>	<u>Percent</u>
South Central.....:	119,075	5.8	15.1	895	13.4
East South Central.....:	39,608	1.9	20.2	808	12.9
West South Central.....:	79,476	3.9	12.7	946	14.0
Texas.....:	45,316	2.2	-14.6	925	-11.1
Oklahoma.....:	11,743	.6	54.8	903	42.9
North Central.....:	746,472	36.1	19.8	1,562	3.0
East North Central.....:	630,762	30.5	23.3	1,651	4.3
West North Central.....:	115,710	5.6	3.9	1,205	-4.8
North Atlantic.....:	721,657	8.0	23.1	1,412	9.9
South Atlantic.....:	165,751	34.9	19.6	1,023	4.1
Mountain.....:	40,107	2.0	105.3	1,114	71.1
Pacific.....:	273,195	13.2	38.9	1,858	38.9
United States.....:	2,066,257	100.0	23.9	1,383	9.1

1/ The 1954 sales were adjusted by the BLS index of wholesale prices of meat and meat products, 1947-1949 = 100.

Source: Census of Manufactures, Industry Statistics.

adjusted sales per plant increased 71 percent during this 4-year span. Average plant volume increased 43 percent in Oklahoma from 1954 to 1958, but decreased more than 11 percent in Texas. Value added per production worker also increased 262 percent in Oklahoma during 1947-58 as compared to about a 100 percent increase in Texas.

Packing House Branches 14/

Numbers of packing house branches in the United States declined 29 percent during 1948-58 (table 11). Number of packer branches declined in all regions of the United States from 1948-58 with the largest reductions reported for the Pacific Region. Packer branches decreased from 35 to 26 in Texas and from 5 to 4 in Oklahoma during this period. Most of the decline took place between 1954 and 1958. This decline may be partially explained by the increasing volumes of meat sold directly by distant packers to large-volume retailers and wholesalers through local sales representatives. These increases in direct sales occurred concurrently with the construction of modern highways and adaptation of refrigerated trucks by the meat industry. In 1929, packers distributed 47 percent of their production through branch houses as compared to 19 percent in 1954. 15/

The average number of employees per packing house branch plant increased in all areas except the East North Central Region during the 1948-58 period (table 8). The number of production workers per plant in the West South Central Region, which includes Texas and Oklahoma, increased substantially from 1948 to 1958. Increases in production workers per plant in general, result from the increased processing functions performed by many branch houses.

Adjusted total sales volume of packing branch houses decreased in all regions from 1948 to 1958 with the exception of the West South Central Region (table 12). Sales of branch houses increased considerably in the South Central and South Atlantic Regions from 1948 to 1954 and in some other areas, but after 1954 sales decreased substantially in all areas. Census data were not available for Oklahoma, but total sales of branch houses in Texas decreased 17 percent from 1954 to 1958.

Average sales per branch house in the United States increased from 1948 to 1954, but decreased in the 1954-58 period. Relatively large increases in sales per plant are shown in table 12 for the West South Central Region, including Texas, and the South Atlantic Region for the periods 1948-58 and 1954-58. Most of the other regions show a decrease in average sales from 1954 to 1958. Both branch house numbers and sales have been decreasing in the United States along with a decline in average sales. Average sales per plant in the West South Central and the South Atlantic Regions increased even though numbers of plants and total sales have decreased. In some areas, packer branch houses are becoming specialized hotel and restaurant suppliers.

14/ Nonslaughtering establishments which process and distribute fresh and processed meat and are affiliated with National Packers.

15/ Wilson, D. L., Pence, Betty S., and Phillips, V. B., p. 22 (see footnote 11, p. 14).

Table 11.--Packer branch houses: Number of establishments and production workers per plant, by census regions, Texas and Oklahoma, for 1958, and percentage changes 1948-58 and 1954-58

Region and State	Establishments				Production workers per firm		
	1958	Percentage change			1958	Percentage change	
		1948-58	1954-58	1948-58		1954-58	
	Number	Percent	Percent	Percent	Number	Percent	Percent
South Central.....	89	17.1	-19.1	-20.3	51	30.8	8.5
East South Central.....	36	6.9	-23.6	-26.5	41	17.1	0.0
West South Central.....	53	10.2	-15.9	-15.9	58	38.1	11.5
Texas.....	26	5.0	-25.7	-21.2	66	46.7	26.9
Oklahoma.....	4	.8	-20.0	0.0	NA	NA	NA
North Central.....	106	20.4	-26.4	-21.3	27	-6.9	-15.6
East North Central.....	89	17.1	-18.3	-26.8	27	-6.9	-15.6
West North Central.....	17	3.3	-51.6	-34.6	30	12.9	2.9
North Atlantic.....	190	36.5	-32.9	-22.4	31	14.8	-6.1
South Atlantic.....	94	18.1	-30.9	-26.0	44	37.5	4.8
Mountain.....	12	2.3	-14.3	33.3	NA	NA	NA
Pacific.....	29	5.6	-38.3	-23.7	NA	NA	NA
United States.....	520	100.0	-29.2	-21.7	38	22.6	0.0

Source: Census of Business, Wholesale Trade.

Table 12.--Packing branch houses: Total and average sales by census regions, Texas and Oklahoma, for 1958, and percentage changes 1948-58 and 1954-58

Region and State	Sales				Sales per plant		
	1958		Percentage change		1958	Percentage change	
	Actual	Distribution	1948-58 <u>1/</u>	1954-58 <u>1/</u>		1948-58 <u>1/</u>	1954-58 <u>1/</u>
	1,000 dollars	Percent	Percent	Percent		1,000 dollars	Percent
South Central.....	388,137	16.8	1.8	-21.6	4,361	25.8	-1.3
East South Central.....	134,311	5.8	-7.1	-30.4	2,534	-17.6	-35.6
West South Central.....	253,816	11.0	7.2	-16.0	7,050	87.5	47.0
Texas.....	127,970	5.6	-.6	-17.2	4,922	33.9	5.0
Oklahoma.....	NA	NA	NA	NA	NA	NA	NA
North Central.....	419,782	18.2	-22.3	-28.9	3,960	5.5	-10.8
East North Central.....	333,008	14.4	-20.9	-29.3	3,742	-3.1	-15.0
West North Central.....	86,774	3.8	-27.4	-27.2	5,104	49.4	11.3
North Atlantic.....	858,017	37.3	-23.9	-33.7	4,516	13.4	-14.5
South Atlantic.....	425,981	18.5	-3.7	-20.4	4,532	39.3	7.5
Mountain.....	NA	NA	NA	NA	NA	NA	NA
Pacific.....	NA	NA	NA	NA	NA	NA	NA
United States.....	2,302,905	90.8	-15.0	-27.5	4,429	20.1	-7.5

1/ Sales are adjusted by the BLS index of wholesale prices of meat and meat products, 1947-49 = 100.

Source: Census of Business, Wholesale Trade.

Meat Merchant Wholesalers 16/

Meat merchant wholesalers increased relatively more, both in numbers and sales volume, than any other type of meat handler since 1948. Numbers of meat wholesalers increased 39 percent in the United States from 1948 to 1958 (table 13). Meat wholesalers increased even more rapidly in Texas and Oklahoma during 1948-58 when numbers more than doubled. Most of the increases in wholesaler numbers, however, took place prior to 1954.

Sales by meat wholesalers approximately doubled in the United States from 1948 to 1958 (table 14). Sales increased more in the South Central Region, especially the West South Central Region, than in any other region during this period. Data on wholesalers were not available for Oklahoma in 1958, but sales by Texas wholesalers almost tripled from 1948 to 1958. Average sales per plant also rose substantially in all regions. Average sales or size of firm increased most in the North Central and Pacific Regions during 1954-58 but a substantial rise, 55 percent, was recorded for the West South Central Region. Average sales per plant in Texas increased almost 80 percent. Although total and average sales of wholesalers increased in all regions after 1954, with the exception of the South Central Region, the largest increases in sales took place before 1954.

Retail Food Stores

Perhaps the most dramatic changes occurring in food processing and marketing have been at retail. Meatpackers and wholesalers must contend with markets and chain organizations as the dominant forces in food retailing. Supermarkets, or grocery stores with sales of \$375,000 or more annually, are expanding at a rapid pace, and it has been estimated that at least 75 percent of all grocery store sales will be made through 35,000 supermarkets by 1965. In 1960, supermarkets accounted for 68 percent of the total grocery store business. 17/ Grocery retailing, nevertheless, remains an industry of large numbers. 18/

Numbers of grocery stores of all size groups decreased in the United States from 1948 to 1958 (table 15). When classified as in table 15, the most significant decrease was recorded for firms with 1 to 3 stores. Store numbers of these firms dropped 32 percent but their proportion of sales increased from 62 percent in 1948 to 68 percent in 1958.

Total numbers of retail grocery stores also decreased in Texas and Oklahoma during 1948-58 (table 15). Texas firms with 1 to 3 sales units dropped substantially resulting in a smaller relative increase in total sales for these firms than indicated for the United States or for other size groups of stores in Texas. Retail grocery firms in Texas with 4 to 10 and more stores exhibited considerable growth in both numbers and proportion of sales which is contrary to the pattern for the larger firms in the United States. In Oklahoma, store numbers of firms with 1 to 3 stores

16/ Firms which are primarily buyers of carcasses and sellers of primal cuts. These firms are known as "breakers" or "jobbers" and specialize in selling wholesale cuts.

17/ DeLoach, B. D. Changes in Food Retailing. Wash. Agr. Expt. Sta. Bul. 619. October 1960.

18/ Muller, W. F. and Garoin, L. Changes in the Market Structure of Grocery Retailing 1940-1958. Res. Rpt. 5, Agr. Expt. Sta., Univ. Wis., April 1960.

Table 13.--Meat merchant wholesalers: Number of establishments and production workers per plant, by census regions, Texas and Oklahoma, for 1958, and percentage changes 1948-58 and 1954-58

Region and State	Establishments				Production workers per firm 1954 <u>1</u> /
	1958	Percentage change			
		1948-58	1954-58		
<u>Number</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Number</u>	
South Central.....	522	12.7	73.4	-1.1	9
East South Central....	130	2.9	49.4	-1.5	10
West South Central....	392	8.8	83.2	-1.0	9
Texas.....	243	5.4	117.0	0.0	9
Oklahoma.....	55	1.2	103.7	5.8	8
North Central.....	1,159	26.0	21.0	.6	8
East North Central....	873	19.6	16.7	-1.2	8
West North Central....	286	6.4	36.2	8.3	8
North Atlantic.....	1,688	37.9	9.3	1.3	8
South Atlantic.....	394	8.8	72.8	7.9	9
Mountain.....	141	3.2	50.0	12.8	8
Pacific.....	555	12.4	45.3	6.5	8
United States.....	4,459	100.0	39.3	2.3	8

^{1/} Not available for 1958.

Source: Census of Business, Wholesale Trade.

decreased by more than 40 percent, but no major changes were evident in numbers by firms with 4 or more stores.

Store numbers relative to sales volume is an indication of concentration in food retailing. In 1948, retail grocery stores with annual sales of \$300,000 or more comprised about 15 percent of the total grocery stores in the United States and accounted for 63 percent of the grocery sales (table 16). By 1958 grocery stores with sales of \$300,000 or more made up 28 percent of the grocery store population and contributed 85 percent of the grocery sales. Perhaps even more striking is the fact that, in 1958, 4 percent of the grocery stores had annual sales of \$1,000,000 or more per store, and these stores accounted for 46 percent of total grocery store sales.

The trend in Texas and Oklahoma as elsewhere is toward fewer numbers of stores, but relatively greater numbers of large-volume stores. Grocery stores with annual sales of \$300,000 or more in Texas in 1958 accounted for 66 percent of the grocery sales as compared to 31 percent in 1948 (table 17). ^{19/} Stores in Texas with sales of \$1,000,000 or more made up 39 percent of the 1958 grocery sales.

^{19/} Some of the increase in importance of large stores between 1948 and 1958 is attributed to an increase in the general price level.

Table 14.--Meat merchant wholesalers: Total and average sales per plant, by census regions, Texas and Oklahoma, for 1958, and percentage changes 1948-58 and 1954-58

Region and State	Sales				Sales per plant		
	1958		Percentage change		1958	Percentage change	
	Actual	Distribution	1948-58 $\frac{1}{2}$	1954-58 $\frac{1}{2}$		1948-58 $\frac{1}{2}$	1954-58 $\frac{1}{2}$
	1,000 dollars	Percent	Percent	Percent	1,000 dollars	Percent	Percent
South Central.....	273,350	7.0	157.3	-2.2	524	48.4	0.0
East South Central.....	52,878	1.3	84.7	-25.1	407	23.7	-23.9
West South Central.....	220,472	5.7	184.1	7.0	562	54.8	8.1
Texas.....	147,823	3.8	286.1	7.6	608	77.8	7.6
Oklahoma.....	NA	NA	NA	NA	NA	NA	NA
North Central.....	1,017,148	26.2	128.1	25.1	878	88.4	24.4
East North Central.....	844,275	21.8	124.5	25.7	967	92.2	27.2
West North Central.....	172,873	4.4	147.2	21.8	604	81.4	14.0
North Atlantic.....	1,779,164	45.9	71.1	11.1	1,054	56.4	9.7
South Atlantic.....	252,117	6.5	106.0	12.4	640	19.2	4.2
Mountain.....	73,554	1.9	87.5	30.0	522	25.2	15.5
Pacific.....	483,659	12.5	141.4	19.5	871	66.2	12.1
United States.....	3,878,992	100.0	98.5	14.9	870	42.4	12.3

1/ Sales adjusted by BLS index of wholesale prices of meat and meat products, 1947-49 = 100.

Source: Census of Business, Wholesale Trade.

Table 15.--Number of grocery stores and sales by size of firm, United States, Texas and Oklahoma, 1948 and 1958

Item	United States	Texas	Oklahoma
	<u>Stores</u>	<u>Stores</u>	<u>Stores</u>
Number, by size of firm and year:			
1948:			
1 to 3 stores.....	352,892	21,078	6,070
4 to 10 stores.....	2,497	198	62
11 or more stores.....	22,550	737	163
Total.....	377,939	22,013	6,295
1958:			
1 to 3 stores.....	239,861	14,721	3,558
4 to 10 stores.....	2,312	257	62
11 or more stores.....	17,623	1,100	173
Total.....	259,796	16,078	3,793
	<u>1,000</u>	<u>1,000</u>	<u>1,000</u>
	<u>dollars</u>	<u>dollars</u>	<u>dollars</u>
Sales, by size of firm and year:			
1948:			
1 to 3 stores.....	15,451,248	962,135	NA
4 to 10 stores.....	786,672	53,733	NA
11 or more stores.....	8,532,203	324,361	NA
Total.....	24,770,123	1,340,229	NA
1958:			
1 to 3 stores.....	45,780,052	1,457,392	374,048
4 to 10 stores.....	1,842,565	153,060	NA
11 or more stores.....	19,213,184	885,368	NA
Total.....	66,835,801	2,495,820	564,428

Source: Census of Business, Retail Trade.

In Oklahoma, stores with sales of \$100,000 or more annually accounted for 84 percent of the sales in 1958 as compared to 61 percent in 1948 (table 17). Those with annual sales of \$300,000 or more were responsible for 53 percent of the Oklahoma sales in 1958. The higher percentage of sales made by large volume retailers in Texas is due primarily to the larger number of populous cities and consequently more large volume stores in Texas relative to Oklahoma.

In Texas and Oklahoma, as well as nationally, many independent retailers have become affiliated with voluntary or cooperative buying organizations. By providing independent retailers with an opportunity to purchase their products on a basis comparable with large volume chains and offering various other services these groups have grown rapidly -- more rapidly than have the corporate chains -- since the mid-1940's. In 1960, these groups accounted for 54 percent of all independent grocery store numbers and for 79 percent of all sales by independents. Sales by

Table 16.--Retail grocery stores: Number of stores and sales volume, by sales classification,
United States, 1948, 1954, and 1958

Sales size	1948		1954		1958	
	Stores	Sales volume	Stores	Sales volume	Stores	Sales volume
	<u>Number</u>	<u>1,000 dollars</u>	<u>Number</u>	<u>1,000 dollars</u>	<u>Number</u>	<u>1,000 dollars</u>
1,000,000 and over.....	1,911	2,756,819	6,242	10,722,693	10,332	18,756,662
500,000-999,999.....	5,360	3,679,836	7,507	5,293,876	9,092	6,445,014
300,000-499,999.....	6,197	2,391,162	7,711	2,977,974	8,369	3,227,013
100,000-299,999.....	36,222	5,774,099	40,398	6,523,086	39,422	6,463,180
50,000- 99,999.....	60,916	4,253,476	55,093	3,857,765	45,546	3,199,327
30,000- 49,999.....	58,142	2,258,727	50,016	1,934,687	45,629	1,769,629
20,000- 29,999.....	41,104	1,008,732	36,699	883,331	29,473	715,210
10,000- 19,999.....	50,183	736,098	38,442	554,602	32,602	471,234
5,000- 9,999.....	29,261	214,077	18,215	128,483	16,305	114,434
Less than 5,000.....	36,905	93,677	6,415	22,239	6,026	20,837
Total.....	326,201	23,166,703	266,738	32,898,736	242,796	41,182,540

Source: Census of Business, Retail Trade.

Table 17.--Retail grocery stores: Number of stores and sales volume, by sales classification, Oklahoma and Texas, 1948 and 1958

Year and sales size	Oklahoma		Texas	
	Stores	Sales volume	Stores	Sales volume
	<u>Number</u>	<u>1,000 dollars</u>	<u>Number</u>	<u>1,000 dollars</u>
1948:				
\$300,000 and over.....	187	(D)	677	410,481
100,000-299,999.....	546	(D)	2,346	397,707
50,000- 99,999.....	851	59,873	3,245	229,427
30,000- 49,999.....	831	32,170	3,020	117,685
20,000- 29,999.....	692	16,846	2,120	51,991
10,000- 19,999.....	893	13,033	2,804	41,087
5,000- 9,999.....	631	4,620	1,718	12,456
Less than 5,000.....	685	1,915	2,705	6,383
Total.....	6,295	332,579	22,013	1,340,229
1958:				
\$1,000,000 and over.....	112	(D)	576	916,348
500,000-999,999.....	149	(D)	566	399,286
300,000-499,999.....	150	57,067	585	226,508
100,000-299,999.....	652	109,231	2,727	444,033
50,000- 99,999.....	588	41,323	2,684	192,267
30,000- 49,999.....	652	25,135	2,462	95,758
Less than 30,000.....	1,232	19,915	5,368	79,792
Total.....	3,535	533,572	14,968	2,353,992

(D) Withheld to avoid disclosure.

Source: Census of Business, Retail Trade.

unaffiliated independents represented 13 percent of the total grocery store sales in 1960 (table 18). In addition, the affiliated groups of retailers have moved rapidly to centralized purchasing of meat and other perishables. Most voluntary and cooperative groups in the Southern Plains have introduced centralized meat buying programs or are considering doing so.

Implications

These trends toward voluntary and cooperative groups, together with reductions in total store numbers and continued growth in sales of corporate chains and supermarkets, are especially significant for the Southern Plains livestock and meat industry. When retail units or firms become large, or join together into horizontally and vertically integrated groups they generally tend to (1) upgrade and standardize quality of products handled, (2) reach out much further for supplies of meat and other perishables, and (3) seek out the more specialized, dependable, and larger-volume suppliers.

In contrast, most of the meatpackers and processors in the Southern Plains are small-volume, locally-oriented firms. More specialization and increases in the size

Table 18.--Distribution of grocery store sales in the United States among chains, unaffiliated independents, and affiliated independents, 1947-60

Retailer type	1947	1953	1956	1958	1960
	Percent	Percent	Percent	Percent	Percent
Chains ^{1/}	37	36	37	39	39
Unaffiliated independents	34	25	19	16	13
Affiliated independents	29	39	44	45	48
Total	100	100	100	100	100

^{1/} Chains include firms with four or more stores.

Source: Progressive Grocer, 28th Annual Survey, Facts in Grocery Distribution.

of slaughtering establishments may be needed to supply large-volume retailers with the required volume and quality of meat products, and to handle the output of the growing cattle feeding industry and the needs of the growing population.

SOUTHERN PLAINS MEATPACKER OPERATIONS

Most of the 983 slaughtering establishments in the Southern Plains in 1959 were small-volume, butcher-type plants (table 19). ^{20/} About 18 percent were "medium volume" plants while plants classified as "large" accounted for 14 percent of the total number. ^{21/} Thirty of these slaughtering establishments in Texas and 2 in Oklahoma qualified as federally-inspected slaughtering plants (FIS) in 1960 and, therefore, were authorized to engage in interstate commerce. The remaining plants are prohibited by law from selling their products in other States. In most cases, substantial investment in additional equipment, remodeling, etc., would be needed if these plants were to qualify for Federal inspection.

About five times as many slaughtering plants were located in Texas as in Oklahoma (table 19). This is due principally to the large number of butcher-type firms in Texas. Numbers of large and medium type plants were only twice as large in Texas as in Oklahoma. Large and medium type slaughtering plants, therefore, accounted for a greater proportion of the total numbers of plants in Oklahoma than they did in Texas.

^{20/} Numbers of slaughtering plants cited in table 4 were derived from the Census of Manufactures estimates and include only plants slaughtering 300,000 pounds or more liveweight annually. Table 16 includes all slaughtering plants in Texas and Oklahoma.

^{21/} Slaughtering plants are classified as follows:

Large--establishments with an output of 2,000,000 pounds or more liveweight annually.

Medium--establishments with an output of 300,000 to 1,999,999 pounds liveweight annually.

Small--establishments with an output of less than 300,000 pounds liveweight annually.

Table 19.--Texas and Oklahoma packers: Number of slaughtering establishments, by size, 1959 ^{1/}

Size of establishment	Texas	Oklahoma	Total
	<u>Number</u>	<u>Number</u>	<u>Number</u>
Large	101	40	141
Medium	119	55	174
Small	600	68	668
Total	820	163	983

^{1/} Based on number of livestock slaughter plants, March 1, 1960, as reported by the Crop Reporting Board, U. S. Dept. of Agr., AMS, MtAn 1-2-2(60).

Although large establishments comprised only 14 percent of the slaughtering plants in the Southern Plains, more than 87 percent of the total meat handled by packers was accounted for by these firms in 1959 (tables 19 and 20). The total volume of meat handled by the small slaughtering establishments was slightly larger in 1959 than that sold by medium-sized plants. Relative contributions of the large and medium packers to total slaughter were about the same in Texas as in Oklahoma. However, the small plants in Texas handled a larger share of the total slaughter volume than did the same type plants in Oklahoma.

Table 20.--Texas and Oklahoma packers: Total volume of fresh meat and cured products handled, by size of establishment, 1959

Size of establishment	Texas	Oklahoma	Total
	<u>1,000 pounds</u>	<u>1,000 pounds</u>	<u>1,000 pounds</u>
Large	1,300,301	325,611	1,625,912
Medium	80,313	28,486	108,799
Small	109,863	6,491	116,354
Total	1,490,477	360,588	1,851,065

Most meatpackers in the Southern Plains are not highly specialized. Approximately two-thirds of the plants in Texas and Oklahoma slaughtered three or more classes of livestock in 1959 (table 21). Specialization by classes of animals slaughtered appears to be more prevalent among the smaller firms than among the large firms. Only a few firms slaughtered more than three classes of livestock in Oklahoma, since lamb and mutton slaughter are relatively unimportant in that State compared to Texas. The four classes of livestock are cattle, calves, hogs, and sheep and lambs.

Sheep and lamb slaughter was more concentrated among the larger packers in both Texas and Oklahoma (table 22). In each State, over 90 percent of sheep and

Table 21.--Texas and Oklahoma packers: Proportion of establishments slaughtering one, two, three, or four classes of livestock, by size of plant, 1959 1/

State and size-class of plant	Number of classes of livestock slaughtered				Total
	One	Two	Three	Four	
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
Texas packers:					
Large.....	8.9	16.1	37.5	37.5	100.0
Medium.....	18.2	9.1	45.4	27.3	100.0
Small.....	15.0	25.0	20.0	40.0	100.0
All.....	12.7	17.8	33.1	36.4	100.0
Oklahoma packers:					
Large.....	10.0	27.5	55.0	7.5	100.0
Medium.....	0.0	17.0	67.9	15.1	100.0
Small.....	21.4	46.4	28.6	3.6	100.0
All.....	8.3	27.3	54.5	9.9	100.0

1/ The classes of livestock include cattle, calves, hogs, and sheep and lambs.

Table 22.--Texas and Oklahoma packers: Cumulative proportion of livestock slaughtered by 20 largest packers, by class of livestock, 1959 1/

State and size-class of plants	Cattle	Calves	Hogs	Sheep and lambs	Total dressed weight
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
Texas packers:					
4 largest.....	23.3	22.1	43.0	92.9	28.4
10 largest.....	44.4	43.7	67.7	95.5	45.5
15 largest.....	51.5	57.8	72.7	95.6	53.9
20 largest.....	59.4	64.9	74.9	95.6	60.0
Oklahoma packers:					
4 largest.....	42.4	53.0	56.2	96.0	49.0
10 largest.....	56.8	65.6	68.5	97.7	62.3
15 largest.....	66.3	71.9	76.5	98.2	70.9
20 largest.....	74.5	76.1	81.8	99.4	77.5

1/ Slaughter concentration is ranked by species. Therefore, individual firms are not necessarily in the same size-class for each species.

lamb slaughter occurred in the 4 largest plants, while for other classes of livestock the proportions were much lower. This pattern of concentration corresponds with that for other areas of the country. ^{22/} Although the data in table 22 suggest a higher degree of concentration in Oklahoma than in Texas, this is mainly due to the larger number of plants in Texas.

Volume and Quality of Meat and Meat Products Handled by Packers

The meat and meat products handled by packers came from two sources (1) own slaughter and (2) purchases of dressed meat and cured products from other packers and wholesale distributors.

Volume and Quality of Livestock Slaughtered

Southern Plains packers produced 1.5 billion pounds of fresh meat in 1959 from livestock slaughtered within Texas and Oklahoma (tables 23 and 24). In Oklahoma, dressed meat derived from hog slaughter accounted for more of the total slaughter than any other animal type, when animals are classified as in table 21. In Texas, steer and heifer slaughter contributed more to total slaughter than did the slaughter from other major classes of beef or other species. Dressed meat from cow and bull slaughter and calf and veal slaughter was also of considerable importance in Texas and Oklahoma. Sheep and lamb slaughter accounted for less than one percent of the total dressed production in Oklahoma in contrast to Texas where four percent of the total production was from sheep and lamb slaughter.

Estimates of the quality of beef heifers and steers slaughtered by Texas and Oklahoma packers were almost identical (table 25). About 20 percent were estimated by packers to be of U. S. Choice quality. The combined totals of U. S. Choice and U. S. Good grade were estimated by packers in both Texas and Oklahoma to be about 77 percent. ^{23/} In most instances, beef heifers and steers were acquired as finished animals from feedlots or as grass fat animals from farms and ranches. Cows and bulls were classified primarily as U. S. Commercial or lower in quality. Meat from these animals was utilized principally for processing into sausage and variety meats or for shipment as boned beef to other areas of the United States and occasionally to other countries. Slaughter livestock classified as calf and veal by packers includes calves weighing up to 550 pounds live weight. Consequently, the quality of calf and veal slaughter, by Southern Plains packers was relatively high. In Texas, 56 percent of the calf and veal slaughter was estimated to be of U. S. Good quality as compared to 61 percent in Oklahoma.

Estimated grades of the sheep and lamb slaughter were not available for Oklahoma. In Texas the estimated grades for the total sheep and lamb slaughter was as follows: U. S. Prime and Choice - 37 percent, U. S. Good - 27 percent, U. S. Utility - 20 percent,

^{22/} Effect of Federal Lamb and Mutton Grades on Producer and Consumer Prices, pp. 8-9, March 7, 1962 (a special report prepared by the U. S. Department of Agriculture at the request of the House of Representatives Committee on Agriculture).

Williams, Willard F., Bowen, Earl K., and Genovese, Frank C. Economic Effects of U. S. Grades for Beef. U. S. Dept. Agr. Mkt. Res. Rpt. 298, January 1959, p. 23.

^{23/} Estimates by packers in Texas and Oklahoma of the amount and quality of meat graded, appears to be slightly higher than U. S. Department of Agriculture estimates.

Table 23.--Texas and Oklahoma packers: Number of livestock slaughtered, by type of livestock, 1959

Type of livestock	Texas packers	Oklahoma packers	Total
	<u>Head</u>	<u>Head</u>	<u>Head</u>
Beef heifers and steers.....	797,637	197,246	994,883
Cows and bulls.....	501,953	113,213	615,166
Calf and veal.....	757,465	70,845	828,310
Sheep and lamb.....	1,023,337	6,800	1,030,137
Hogs.....	2,241,524	772,200	3,013,724

Table 24.--Texas and Oklahoma packers: Dressed weight of livestock slaughter, by type of livestock, 1959

Type of livestock	Texas packers	Oklahoma packers	Total
	<u>1,000 pounds</u>	<u>1,000 pounds</u>	<u>1,000 pounds</u>
Beef heifers and steers.....	401,041	89,986	491,027
Cows and bulls.....	245,869	53,532	299,401
Calf and veal.....	219,796	20,039	239,835
Sheep and lamb.....	44,150	340	44,490
Hogs.....	342,267	126,998	469,265
Total.....	1,253,123	290,895	1,544,018

Table 25.--Texas and Oklahoma packers: Packer estimates of U. S. grade equivalent of livestock slaughtered, by type of livestock, 1959

State and type of livestock	U. S. Prime and Choice	U. S. Good	U. S. Standard	U. S. Commercial and lower	Total
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
<u>Texas packers:</u>					
Beef heifers and steers.....	19.8	57.6	15.1	7.5	100.0
Cows and bulls.....	0	.2	7.3	92.5	100.0
Calf and veal.....	8.1	48.4	32.8	10.7	100.0
<u>Oklahoma packers:</u>					
Beef heifers and steers.....	20.1	57.0	18.2	4.7	100.0
Cows and bulls.....	0	0	1.9	98.1	100.0
Calf and veal.....	4.6	56.6	35.2	3.6	100.0

and U. S. Cull - about 16 percent. The Texas firms were interviewed in the summer of 1960. The new lamb grade standards had been in effect since March, and the change was not specifically mentioned to the firms. A substantial portion of the sheep and lamb slaughter in Texas consisted of older animals which were utilized in the processing operations.

Volume and Quality of Dressed Meat Purchased

Southern Plains packers purchased 16 percent of their total meats, or about 298 million pounds of fresh meat or cured products, from other packers or wholesale meat distributors in 1959 (table 26). Fresh pork and cured pork products made up 85 percent of the total meat purchases with fresh pork alone accounting for 61 percent of the total. Texas and Oklahoma purchasing patterns were similar with the exception of calf and veal and smoked and cured pork, which made up a higher proportion of the total purchases in Texas than in Oklahoma. Except for pork, the items were purchased principally in carcass form rather than as wholesale or retail cuts (table 27).

Table 26.--Texas and Oklahoma packers: Volume of dressed or cured meats purchased, by kind of meat, 1959

Kind of meat	Texas packers	Oklahoma packers	Total
	1,000	1,000	1,000
	pounds	pounds	pounds
Beef.....	28,838	8,571	37,409
Calf and veal.....	5,563	123	5,686
Sheep and lamb.....	792	849	1,641
Fresh pork.....	141,574	40,473	182,047
Smoked and cured pork.....	42,195	6,073	48,268
Sausage, variety, and others....	18,392	4,286	22,678
Total.....	237,354	60,375	297,729

Table 27.--Texas and Oklahoma packers: Form of dressed meat purchases, by kinds of meat, 1959

Form of purchase	Beef	Calf or veal	Lamb or mutton	Fresh pork
	Percent	Percent	Percent	Percent
Texas packers:				
Carcass or sides.....	79.4	69.3	70.3	15.4
Quarters.....	13.3	16.3	13.4	0
Others.....	7.4	14.4	16.3	84.6
Total.....	100.0	100.0	100.0	100.0
Oklahoma packers:				
Carcass or sides.....	85.4	99.4	100.0	16.2
Quarters.....	1.7	0	0	1/
Others.....	12.9	.6	0	83.8
Total.....	100.0	100.0	100.0	100.0

1/ Less than .05 percent.

More than 77 percent of the total dressed beef purchased by packers in Texas and Oklahoma was estimated to be equivalent to U. S. Choice or higher in grade (table 28). The relatively large percentage of high-quality beef purchased is generally attributed to a deficit of high quality beef during certain periods in Texas and Oklahoma. Consequently, packers ship in the desired amounts to fill their immediate demands.

Most of the calf and veal slaughter in the Southern Plains and other areas consists of unfinished and immature animals which do not qualify for U. S. Choice or higher grades. Packers in Texas and Oklahoma estimated that the majority of the calf and veal meat purchased were equivalent in quality to U. S. Good (table 28). Lamb and mutton purchases by Southern Plains packers were estimated to be primarily U. S. Choice or higher.

Table 28.--Texas and Oklahoma packers: Estimated U. S. grade equivalent, of dressed beef, calf and lamb purchased, 1959 ^{1/}

State and item	U. S. Prime and Choice	U. S. Good	U. S. Standard 2/	U. S. Commercial or lower 3/	Total
	Percent	Percent	Percent	Percent	Percent
<u>Texas packers:</u>					
Beef.....	77.3	10.2	1.5	11.0	100.0
Calf and veal.....	10.2	57.8	18.2	13.6	100.0
Lamb and mutton....	57.2	34.5	1.8	6.6	100.0
<u>Oklahoma packers:</u>					
Beef.....	77.7	15.7	2.9	3.7	100.0
Calf and veal.....	0	67.3	32.7	0	100.0
Lamb and mutton....	98.0	2.0	0	0	100.0

^{1/} Quality of meat, comparable to USDA grade standards, but not necessarily USDA graded or rolled.

^{2/} The lamb and mutton is U. S. Utility.

^{3/} The lamb and mutton is U. S. Cull.

Supply Patterns for Livestock and Meat Purchases

Packers in Texas and Oklahoma acquired most of their slaughter livestock from suppliers within their own states. Purchases of additional fresh meat and cured products were obtained principally from packers or wholesale meat distributors in Kansas and surrounding Midwestern States.

Livestock Supply Sources

In 1959, slaughterers in Texas received 84 percent or more of their total cattle, calves and vealers, and sheep and lambs from producers in Texas (table 29). Texas, although not an important hog producing state, supplied 60 percent of the 1959 hog kill. Most of the remaining hogs were shipped into Texas from Nebraska, Iowa, Missouri, Illinois, Kansas and Oklahoma. A large proportion of the heifers and steers shipped into Texas for slaughter originated in New Mexico, Arizona, Kansas, and Missouri. Out-of-state sheep and lambs purchased by Texas packers for immediate slaughter were acquired principally from producers in Colorado, Wyoming, New Mexico, and California.

Table 29.--Texas and Oklahoma packers: State of origin of livestock slaughtered, by type of livestock, 1959 1/

Location and type	Texas	Oklahoma	Kansas	Other States	Total
	Percent	Percent	Percent	Percent	Percent
<u>Texas packers:</u>					
Heifers and steers...	84.6	2.2	.5	12.7	100.0
Cows and bulls.....	95.9	1.1	.1	2.9	100.0
Calves and vealers...	96.1	.8	<u>1/</u>	3.1	100.0
Sheep and lambs.....	84.0	.4	<u>1/</u>	15.6	100.0
Hogs.....	59.8	4.6	1.5	34.1	100.0
<u>Oklahoma packers:</u>					
Heifers and steers...	1.6	78.9	9.7	9.8	100.0
Cows and bulls.....	5.0	88.5	5.8	.7	100.0
Calves and vealers...	1.0	86.8	6.9	5.3	100.0
Sheep and lambs.....	<u>1/</u>	98.5	1.5	<u>1/</u>	100.0
Hogs.....	<u>1/</u>	48.0	8.6	43.4	100.0

1/ Less than .05 percent.

Oklahoma packers, like Texas packers, depended primarily on producers within their own state for livestock (table 29). Almost all of the cattle and calves slaughtered in Oklahoma were bought in Oklahoma as compared to 50 percent of the hogs. The remaining cattle and calf requirements of Oklahoma packers were purchased in Kansas, Nebraska, Iowa, Illinois, and Texas. Out-of-state slaughter hog requirements usually were obtained in Kansas, Missouri or Iowa. Kansas was more important as a source of supply to Oklahoma packers than to Texas packers.

Livestock Purchases by Market Type

Southern Plains meatpackers rely heavily on terminal markets and auctions for their supplies of slaughter livestock (table 30). While Oklahoma packers are terminal market oriented, auctions are relatively more important supply sources of Texas packers. A greater proportion of livestock is bought direct from producers or feedlots in Texas than in Oklahoma.

In both Texas and Oklahoma, the degree to which each type of market was patronized varied with the type of livestock purchased and geographic source of purchases. Auctions were major sources of calves in both Oklahoma and Texas. In Texas they also were major suppliers of slaughter cows and bulls, but in Oklahoma auctions were relatively less important as sources of lower quality cattle. Direct purchases of hogs and sheep and lambs were more important sources for Texas than for Oklahoma packers. Purchases by Texas packers of slaughter steers and heifers from producers or from feedlots were especially important representing about 43 percent of total Texas purchases. Central markets were the principal type of market used by Oklahoma packers for acquiring Oklahoma steers and heifers, and for out-of-state slaughter livestock (table 30).

Table 30.--Texas and Oklahoma packers: Origin of livestock purchased in various types of markets, by class of livestock, 1959

Location and type of market	Cattle		Calves	Sheep	Hogs
	Heifers	Cows	and	and	
	and steers	and bulls	vealers	lambs	
	Percent	Percent	Percent	Percent	Percent
<u>Texas packers</u>					
<u>Purchases in Texas:</u>					
Central markets.....	24.7	27.4	25.7	41.3	23.6
Auctions.....	32.5	60.9	52.4	16.6	30.9
Country 1/.....	20.8	10.3	15.5	36.5	42.5
Other 2/.....	22.0	1.4	6.4	5.6	3.0
Total.....	100.0	100.0	100.0	100.0	100.0
<u>Purchases in other states:</u>					
Central markets.....	49.6	16.8	7.2	14.4	80.5
Auctions.....	8.4	47.1	14.6	20.7	10.8
Country 1/.....	27.7	32.3	17.6	20.9	1.2
Other 2/.....	14.3	3.8	60.6	44.0	7.5
Total.....	100.0	100.0	100.0	100.0	100.0
<u>Oklahoma packers</u>					
<u>Purchases in Oklahoma:</u>					
Central markets.....	50.4	72.3	47.3	93.5	55.3
Auctions.....	27.0	21.6	35.3	.9	17.5
Country 1/.....	14.8	5.3	16.0	2.1	26.8
Other 2/.....	7.8	.8	1.4	3.5	.4
Total.....	100.0	100.0	100.0	100.0	100.0
<u>Purchases in other states:</u>					
Central markets.....	52.0	74.9	30.4	89.9	62.0
Auctions.....	36.8	22.9	67.5	10.1	15.3
Country 1/.....	11.2	2.2	2.1	0	12.8
Other 2/.....	0	0	0	0	9.9
Total.....	100.0	100.0	100.0	100.0	100.0

1/ Includes purchases mainly from farmers and ranchers.

2/ Includes purchases mainly from feedlots and order buyers.

Livestock Purchase or Slaughtering Arrangements

Although the live method of purchasing is traditional in the livestock industry, other methods were used at least occasionally. These include selling on a carcass grade and weight basis, sale by contract, and "other."

The live method consists of immediate cash payment of the purchase of live animals. In the carcass grade and weight method the buyer and seller negotiate on live animals but agree to "settle" on the basis of carcass weight and grade. The final price per pound for each animal is not determined until the animals are slaughtered, graded, and placed in weight groups. The contract purchase arrangement

generally consists of an agreement between the buyer and seller for future delivery of livestock at specified dates, weights and prices according to grade or quality. "Other" purchase arrangements in the Southern Plains are defined as principally custom slaughtering or supplies from feedlots operated by packers.

Southern Plains packers purchased 74 percent or more of their cattle, calves and vealers, sheep and lamb, or hogs on a live basis in 1959 (table 31). The second most important slaughtering or purchasing arrangement was "other." Packers stated that the grade and weight arrangement was being used more frequently than in recent years. However, this method is relatively unimportant when compared to total livestock purchased. The contract method of buying livestock was used to a limited extent by a few of the larger slaughterers and accounts for a small percent of total livestock slaughtered.

Table 31.--Texas and Oklahoma packers: Livestock purchase or slaughtering arrangement, by classes of livestock, 1959

Purchase or slaughtering arrangement	Cattle		Calves	Sheep	Hogs
	Heifers	Cows	and	and	
	and steers	and Bulls	vealers	lamb	
	Percent	Percent	Percent	Percent	Percent
Texas packers:					
Cash (live).....	74.2	88.1	79.6	96.9	94.6
Grade and weight...	7.0	3.9	1.1	1.7	1.2
Contract 1/.....	3.1	1.5	0	3/	0
Other 2/.....	15.7	6.5	19.3	1.4	4.2
Total.....	100.0	100.0	100.0	100.0	100.0
Oklahoma packers:					
Cash (live).....	85.3	89.6	89.2	92.7	93.9
Grade and weight...	3.1	.1	.2	0	0
Contract 1/.....	.2	0	3/	0	.1
Others 2/.....	11.4	10.3	10.6	7.3	6.0
Total.....	100.0	100.0	100.0	100.0	100.0

1/ Thirty days or more.

2/ Primarily custom slaughtering or from own supplies.

3/ Less than .05 percent.

Dressed Meat Purchasing Patterns

Most of the fresh beef, pork, and cured pork products purchased by Southern Plains packers was supplied by packers or wholesale meat distributors in Kansas and other Midwestern States (table 32). Packers in Texas bought most of their calf and mutton and also substantial quantities of beef and sausage products from other packers or meat distributors in Texas. Oklahoma packers acquired their fresh and cured product purchased principally from out-of-state suppliers.

Table 32.--Texas and Oklahoma packers: Geographic origin of dressed meat purchased and type of supplier, by area of purchase, 1959

Geographic origin and supplier type	Beef	Calf and veal	Lamb and mutton	Fresh pork	Smoked & cured pork	Sausage, variety & others
	Percent	Percent	Percent	Percent	Percent	Percent
Texas packers						
<u>Origin:</u>						
Texas.....	33.7	67.0	83.0	6.1	13.3	29.8
Oklahoma.....	5.6	.4	0	.7	.5	1.2
Kansas.....	8.6	1/	0	17.2	26.5	.2
Other states 2/.....	52.1	32.6	17.0	76.0	59.7	68.8
Total.....	100.0	100.0	100.0	100.0	100.0	100.0
<u>Supplier type:</u>						
<u>Purchases in Texas:</u>						
Packers.....	91.9	84.6	64.1	92.2	60.2	80.7
Packer branch houses.....	5.7	.8	35.9	6.2	35.2	13.4
Wholesale distributors.....	1/	1/	0	.4	1.5	1/
Other 3/.....	2.4	14.6	0	1.2	3.1	5.8
Total.....	100.0	100.0	100.0	100.0	100.0	100.0
<u>Purchases from other states:</u>						
Packers.....	100.0	100.0	100.0	95.8	100.0	73.8
Packer branch houses.....	0	0	0	4.1	0	0
Wholesale distributors.....	0	0	0	0	0	0
Other 2/.....	0	0	0	0	0	26.2
Total.....	100.0	100.0	100.0	100.0	100.0	100.0
Oklahoma packers						
<u>Origin:</u>						
Texas.....	8.0	21.0	1/	2.0	1/	1/
Oklahoma.....	20.5	11.7	1.8	6.0	28.6	17.2
Kansas.....	19.3	11.7	.8	33.5	19.2	10.0
Other states 2/.....	52.2	46.3	97.4	58.5	52.2	72.8
Total.....	100.0	100.0	100.0	100.0	100.0	100.0
<u>Supplier type:</u>						
<u>Purchases in Oklahoma:</u>						
Packers.....	100.0	100.0	37.5	100.0	100.0	97.0
Packer branch houses.....	0	0	62.5	0	0	3.0
Wholesale distributors.....	0	0	0	0	0	0
Other 3/.....	0	0	0	0	0	0
Total.....	100.0	100.0	100.0	100.0	100.0	100.0
<u>Purchases from other states:</u>						
Packers.....	100.0	100.0	100.0	100.0	100.0	100.0
Packer branch houses.....	0	0	0	0	0	0
Wholesale distributors.....	0	0	0	0	0	0
Other 3/.....	0	0	0	0	1/	1/
Total.....	100.0	100.0	100.0	100.0	100.0	100.0

1/ Less than .05 percent.

2/ Predominantly midwestern states.

3/ Includes purchases through brokers and processors.

Packers in Oklahoma and Texas purchased the majority of their fresh meat and cured products from other packers whether purchases were made in-state or from suppliers in other states (table 32). The only other major source of meat products was packer branch houses which furnished substantial quantities of lamb and mutton and smoked and cured pork to packers in Texas. Packer branch houses supplied most of the lamb and mutton purchased by packers in Oklahoma.

Grading, Processing, and Pricing Practices of Packers

Grading, processing, and pricing practices on livestock and meat vary considerably in the Southern Plains. The larger plants, generally, operate in accordance with fairly stringent policies relative to grading, buying, and selling meat and meat products. The smaller plants appeared to be more flexible regarding plant operations and policy.

Grading Practices

The majority of the larger packers interviewed in Texas and Oklahoma marked meat with Federal grades when requested to by the buyer, but preferred to use their private labels whenever possible. The medium-sized packers generally used Federal grades for marking the top two or three grades of beef and calf. The practice of marking or stamping meat with Federal grades allows smaller packers to compete with large packers for the chainstore trade and other volume buyers. The nationally recognized Federal grades makes it possible for small packers to utilize a "trade-mark" which is as acceptable to many buyers as that of many popular brands of national packers. The small slaughterers, or butchers, ordinarily sold their meat without grades or brands. These operators would find it costly to pay for Federal grading of their small volume. Also, their customers do not generally demand fresh meat marked with Federal grades.

Most of the beef and calf and veal sold in 1959 by packers in Texas and Oklahoma was sold as either packer branded (private label) or as ungraded meat (table 33). Lamb and mutton sold by Texas packers was delivered primarily with a packer brand or label and although only a small volume of lamb and mutton was sold by Oklahoma packers, more than 57 percent of this product was federally graded. There are no Federal grades for fresh pork or cured pork products. Fresh pork was sold without grades or brands, but a substantial majority of the cured pork products were sold with a packer brand.

Approximately one-half of the beef estimated by slaughterers in Texas to be of U. S. Choice or Good quality was rolled or marked with Federal grades (table 34).^{24/} The remainder was marked with private labels or sold ungraded. Oklahoma packers marked more of the Choice quality beef but less of the Good quality with Federal grades than did Texas packers. In contrast to the grading practices employed for beef, packers in both Texas and Oklahoma rolled a larger percentage of the calf and veal estimated to be U. S. Good than U. S. Choice. Packers in Texas and Oklahoma stated that beef equivalent in quality to U. S. Choice, but not marked with Federal grades, was generally marked with a packer brand. Almost all the mutton grading U. S. Choice or higher was marked with U. S. grades by Texas packers; however, less than 10 percent of the lamb and mutton equivalent to U. S. Good in quality was federally graded.

^{24/} Includes own slaughter and dressed purchases.

Table 33.--Texas and Oklahoma packers: Proportions of meat sold by the various types of grading or marking, and kind of meat, 1959

Type of marking	Fresh meat				Other pork <u>2/</u>
	Beef <u>1/</u>	Calf and veal <u>1/</u>	Lamb and mutton <u>1/</u>	Fresh pork <u>2/</u>	
	Percent	Percent	Percent	Percent	Percent
<u>Texas packers:</u>					
U. S. graded.....	31.2	32.8	35.0	0	0
Packer branded.....	19.7	18.3	54.9	1.0	73.9
U. S. graded and packer branded....	0	1.8	0	0	0
Not graded or branded.....	49.1	47.1	10.1	99.0	26.1
Total.....	100.0	100.0	100.0	100.0	100.0
<u>Oklahoma packers:</u>					
U. S. graded.....	26.5	39.2	57.5	0	0
Packer branded.....	26.5	24.0	37.7	.7	87.4
U. S. graded and packer branded....	0	0	0	0	0
Not graded or branded.....	47.0	36.8	4.8	99.3	12.6
Total.....	100.0	100.0	100.0	100.0	100.0

1/ Represents total slaughter and purchases of dressed meat.

2/ Represents sales. Includes smoked and cured pork and sausage, variety and other meats.

Table 34.--Texas and Oklahoma packers: Proportions of fresh meat equivalent to U. S. Choice, Good, and Standard marked with Federal grades, 1959 1/

Item	U. S. Choice	U. S. Good	U. S. Standard
	Percent	Percent	Percent
<u>Texas packers:</u>			
Beef.....	47.5	57.2	19.3
Calf and veal.....	15.5	60.5	16.6
Lamb and mutton.....	93.0	8.3	0
<u>Oklahoma packers:</u>			
Beef.....	69.2	38.4	14.4
Calf and veal.....	11.9	53.2	22.1
Lamb and mutton.....	<u>2/</u>	<u>2/</u>	<u>2/</u>

1/ Proportion of meat equivalent to U. S. Choice, Good, and Standard is shown in tables 22 and 25.

2/ No data obtained.

Processing Practices

Southern Plains packers processed about one-half of their fresh pork but less than 10 percent of their total beef into smoked and cured products or processed meats (table 35). Most of the meat from lower quality cattle was boned out for shipment or sold as hamburger or ground meat. Meat from higher quality beef animals was not utilized for processing into sausage and variety meats with the exception of trimmings. Only small volumes of calf and veal or lamb and mutton was transferred to processing; however, a few packers in Texas rely on sheep of lower quality for fabrication into variety meats.

Table 35.--Texas and Oklahoma packers: Percent of beef, calf and veal, lamb and mutton, and fresh pork transferred to smoked and cured pork or to sausage and variety meats

Class of meat	Texas packers			Oklahoma packers		
	Transferred to:			Transferred to:		
	Smoked and:	Sausage and :	Total	Smoked and:	Sausage and :	Total
	cured pork:	variety meats:		cured pork:	variety meats:	
	Percent	Percent	Percent	Percent	Percent	Percent
Beef.....	0	8.5	8.5	0	4.5	4.5
Calf and veal.....	0	<u>1</u> /	<u>1</u> /	0	0.4	0.4
Lamb and mutton.....	0	.5	.5	0	0	0
Pork.....	33.5	12.1	45.6	37.3	17.2	54.5

1/ Less than .05 percent.

Pricing Practices

Packers in both Texas and Oklahoma stated that prices paid for livestock were based on competition, a private daily price quotation service from Chicago, U. S. Department of Agriculture Market News releases from terminal markets, and the supply of livestock available. Price quotations from Chicago and Market News releases from terminal markets, however, were the most used pricing guides.

The supply of dressed meat in packer coolers is often a major factor in the bargaining position between buyers and sellers. Meat, being a highly perishable product, must be sold within a relatively short time after being placed in coolers. Packers with a temporary oversupply may be forced to sell below market price rather than hold fresh meat items until spoilage sets in.

Pricing policies can be visualized as a chain pricing pattern. The larger packers established their prices and price patterns relative to competition from other packers and meat wholesalers as well as wholesale meat price quotations and livestock prices. Although supply of and demand for meat and meat products is the overall force in establishing prices, individual packers almost unanimously stated that meeting or besting competition was the prime consideration in the day-to-day setting of prices.

Packers in many instances furnished weekly price sheets to prospective customers, especially large volume chains who placed an order with the packer at the quoted prices or rejected the price offer. Packer salesmen and buyers also often engage in bargaining conferences before prices are established.

Distribution Patterns

Most of the meat and meat products sold by Texas and Oklahoma packers was distributed within the Southern Plains area (table 36). Beef, calf, lamb and mutton were distributed mostly in carcass form, while fresh pork was delivered primarily in wholesale or retail cuts (table 37).

Distribution of Meat Sales by Texas Packers

With the exception of lamb and mutton which was sold predominantly to purchasers in other States, Texas packers distributed most of their meat within Texas (table 36). A large proportion of the lamb sold out-of-state by Texas packers was shipped to the larger Metropolitan areas in the East, while much of the beef sold out-of-state was delivered to buyers in the surrounding states and other areas in the South. A few packers in Texas and Oklahoma, who specialized in the slaughter of cow beef, sold almost all of their production in other states or in other countries.

About 50 percent of the meat sold within the State by Texas packers was distributed in the metropolitan areas of Dallas-Fort Worth, San Antonio, and Houston (table 36). Buyers in the Dallas-Fort Worth area received the largest volume, followed by Houston and San Antonio. Although sales of fresh meat and meat products in Oklahoma by Texas packers were small, more than one-half of their beef, lamb, and sausage sales in Oklahoma were distributed in the Oklahoma City and Tulsa areas. Almost all the fresh pork and smoked and cured pork shipped to Oklahoma was delivered to areas other than Oklahoma City and Tulsa.

Distribution of Sales by Oklahoma Packers

Packers in Oklahoma sold most of their fresh meat and meat products within Oklahoma (table 36). Oklahoma packers, however, shipped about one-third of their lamb and mutton, fresh pork, and smoked and cured products to Texas. This contrasts with the patterns of meat sales of Texas packers who sold a relatively small proportion of their meat in Oklahoma.

Sales in Texas by Oklahoma packers were distributed primarily to areas other than Dallas-Fort Worth, San Antonio and Houston (table 36). In 1959, no meat or meat products were distributed in the Dallas-Fort Worth areas by Oklahoma packers. However, from time to time they have shipped meat to that area.

Approximately one-third of the sales in Oklahoma by Oklahoma packers were made to buyers in Oklahoma City and Tulsa. The pattern of sales was about the same for each kind of meat or meat products handled by Oklahoma packers.

Table 36.--Texas and Oklahoma packers: Volume and distribution of sales of meat of various kinds, in Texas, Oklahoma, and other States, 1959

Item	Beef	Calf and veal	Lamb and mutton	Fresh pork	Smoked & cured pork	Sausage, variety & others
	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds
Sales by Texas packers:	618,577	223,296	44,730	263,452	204,201	136,221
Sales distribution by geographic area	Percent	Percent	Percent	Percent	Percent	Percent
Texas.....	72.3	95.4	21.9	85.0	92.5	90.4
Oklahoma.....	.5	.3	.4	.7	.1	.4
Other states.....	27.2	4.3	77.7	14.3	7.4	9.2
Total.....	100.0	100.0	100.0	100.0	100.0	100.0
In Texas:						
Dallas-Fort Worth...	18.7	22.0	20.4	24.7	33.2	23.7
San Antonio.....	10.2	6.5	19.2	8.3	9.6	11.1
Houston.....	14.3	21.0	21.6	13.5	13.3	8.1
Other Texas.....	56.8	50.5	38.8	53.5	43.9	57.1
Total.....	100.0	100.0	100.0	100.0	100.0	100.0
In Oklahoma:						
Oklahoma City.....	32.3	16.2	1/	.8	.8	34.8
Tulsa.....	22.7	16.2	80.0	.8	.8	52.4
Other Oklahoma.....	45.0	67.6	20.0	98.4	98.4	9.8
Total.....	100.0	100.0	100.0	100.0	100.0	100.0
	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds
Sales by Oklahoma packers:	149,113	24,910	1,189	76,390	68,696	40,290
Sales distribution by geographic area	Percent	Percent	Percent	Percent	Percent	Percent
Texas.....	6.2	15.1	32.3	31.3	32.2	12.4
Oklahoma.....	76.8	79.6	57.3	65.0	63.5	78.1
Other states.....	16.0	5.3	10.4	3.7	4.3	9.5
Total.....	100.0	100.0	100.0	100.0	100.0	100.0
In Oklahoma:						
Oklahoma City.....	25.7	17.6	19.2	26.2	27.5	24.0
Tulsa.....	17.1	12.5	22.1	13.7	14.3	18.7
Other Oklahoma.....	57.2	69.9	58.7	60.1	58.2	57.3
Total.....	100.0	100.0	100.0	100.0	100.0	100.0
In Texas:						
Dallas-Fort Worth...	0	0	0	0	0	0
San Antonio.....	19.5	5.0	14.9	3.0	3.0	1.0
Houston.....	39.0	5.0	65.2	7.0	7.0	2.0
Other Texas.....	41.5	90.0	19.9	90.0	90.0	97.0
Total.....	100.0	100.0	100.0	100.0	100.0	100.0

1/ Less than .05 percent.

Table 37.--Texas and Oklahoma packers: Form of fresh meat sales, by kind of meat, 1959

Form of fresh meat sales	Beef	Calf and veal	Lamb and mutton	Fresh pork
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
<u>Texas packers:</u>				
Carcass or sides...	58.5	63.0	72.8	5.9
Quarters.....	12.5	13.6	<u>1/</u>	.1
Other.....	29.0	23.4	27.1	94.0
Total.....	100.0	100.0	100.0	100.0
<u>Oklahoma packers:</u>				
Carcass or sides...	63.8	74.9	49.6	5.7
Quarters.....	10.2	10.7	0	<u>1/</u>
Other.....	26.0	14.4	50.4	94.3
Total.....	100.0	100.0	100.0	100.0

1/ Less than .05 percent.

Distribution of Sales by Type of Buyer

In 1959, packers in Texas sold 62 percent of their total meat directly to retailers as compared to about the same proportion, 65 percent, for Oklahoma packers. In a similar study in Los Angeles in 1956, 64 percent of the total meat sold in that area by packers was distributed directly to retailing establishments.^{25/} The remaining meat sold by slaughterers in the Southern Plains was purchased, in order of volume, by wholesaler meat distributors, hotels and restaurants, processors, and consumers. Government agencies and other types of buyers also acquired small volumes of meat or meat products (table 38).

A comparison of the sales patterns of Texas and Oklahoma packers indicates small differences in percentages of meat sold to various types of buyers (table 38). Oklahoma packers sold slightly higher percentages of meat to retailers, hotels and restaurants, consumers, and government agencies, but less to wholesale distributors and processors than did Texas packers.

Retail chains, firms with 4 or more stores, accounted for 52 percent of the meat purchased by retailers from Texas packers (table 39). Oklahoma retail chains, on the other hand, received only 36 percent of the meat sold to retailers by Oklahoma packers.

WHOLESALE MEAT DISTRIBUTOR AND PROCESSOR OPERATIONS

Wholesale meat distributors in the Southern Plains consist of packer branch houses, wholesalers, and brokers. These firms are nonslaughterers who often perform specialized services of fabricating and handling fresh meat and cured

^{25/} Dietrich, Raymond A. and Williams, W. F., Meat Distribution in the Los Angeles Area, p. 47 (see footnote 2).

Table 38.--Texas and Oklahoma packers: Distribution of sales among various types of buyers, by kinds of meat, 1959

Type of buyer	Beef	Calf and veal	Lamb and mutton	Fresh pork	Smoked and cured pork	Sausage, variety and other	All meat
	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Texas packer sales to:							
Consumers.....	6.3	11.2	2.5	3.2	3.8	6.5	6.1
Retailers.....	53.9	58.1	32.2	71.8	78.1	67.8	61.6
Hotels, Restaurants and institutions.....	6.5	5.6	2.4	8.6	6.2	12.8	7.2
Government agencies....	5.1	1.7	2.3	3.9	3.6	2.6	3.8
Wholesale distributors:	17.5	21.6	32.9	6.5	6.1	9.5	14.4
Processors.....	9.9	1.6	27.3	5.3	1.7	.4	6.3
Others.....	.8	.2	.4	.7	.5	.4	.6
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Oklahoma packer sales to:							
Consumers.....	8.6	12.8	1.7	6.2	5.1	4.3	7.3
Retailers.....	55.9	68.1	92.7	64.9	70.2	83.5	64.5
Hotels, restaurants and institutions.....	10.6	7.7	3.7	6.1	9.3	6.5	8.7
Government agencies....	4.4	4.4	0	3.6	5.4	1.3	4.1
Wholesale distributors:	10.4	5.4	.2	9.8	9.0	3.6	8.9
Processors.....	8.4	.1	0	8.8	0	.1	5.3
Others.....	1.7	1.5	1.7	.6	1.0	.7	1.2
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 39.--Texas and Oklahoma packers: Distribution of retail sales among retail chains and independent retail establishments, by kinds of meat, 1959

Location and type of retailer	Beef	Calf and veal	Lamb and mutton	Fresh pork	Smoked and cured pork	Sausage, variety and other
	Percent	Percent	Percent	Percent	Percent	Percent
Texas packer sales to:						
Chains ^{1/}	51.9	45.6	48.6	50.6	57.0	54.6
Independents.....	48.1	54.4	51.4	49.4	43.0	45.4
Total.....	100.0	100.0	100.0	100.0	100.0	100.0
Oklahoma packer sales to:						
Chains.....	31.1	29.7	69.9	45.1	43.3	27.0
Independents.....	68.9	70.3	30.1	54.9	56.7	73.0
Total.....	100.0	100.0	100.0	100.0	100.0	100.0

^{1/} Retail firms with four or more stores.

products for their customers. Historically, the primary function of wholesalers has been to break or fabricate carcasses into wholesale or retail cuts for resale to various outlets.

Wholesalers are often referred to by their principal activity as either "jobbers," "hotel and restaurant supply houses," "boners," or "frozen meat handlers." Packer branch houses at one time served principally as redistribution points for meat processed as well as slaughtered at parent packing plants. Both fresh and processed meat items were handled. The modern day branch house, in contrast, is a processor as well as a distributor of meat and has become more heavily specialized in pork and prepared meat items. Some do not handle much fresh meat. Prepared meat plants or processors are primarily manufacturers of sausage items and cured products. Brokers do not physically handle meat or meat products, but negotiate sales between buyers and sellers for these products.

Volume and Quality of Meat Handled by Texas and Oklahoma Wholesale Distributors

Volume and Kinds of Meat Handled

Wholesale meat distributors in the Southern Plains purchased more than 566 million pounds of meat in 1959 (table 40). ^{26/} This amounts to almost one-third as much as the total volume distributed by packers. Beef comprised about 43 percent of this volume and another 39 percent consisted of fresh pork and cured products. Wholesalers accounted for the largest share of the meat sold by wholesale meat distributors in both Texas and Oklahoma. Packer branch houses ranked second in Texas, volume-wise, as compared to processors in Oklahoma.

Table 40.--Texas and Oklahoma wholesale meat distributors and processors:
Volume of dressed meat or cured meats purchased, by kind of meat, 1959 ^{1/}

State and type of distributor or processor	Beef	Calf and veal	Lamb and mutton	Fresh pork	Smoked and cured pork	Sausage, variety and other
	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds
Texas:						
Packer branch houses.....	46,175	9,686	4,012	47,640	42,666	22,387
Wholesalers.....	116,381	52,938	17,899	5,971	3,321	9,170
Processors.....	14,680	6,851	644	11,480	1,971	2,629
Brokers.....	32,770	3,455	505	47,245	3,798	1,611
Total.....	210,006	72,930	23,060	112,336	51,756	35,797
Oklahoma:						
Packer branch houses and wholesalers.....	20,303	3,310	337	7,704	3,798	2,159
Processors.....	15,022	214	6	5,895	268	164
Brokers.....	--	--	--	--	--	--
Total.....	35,325	4,524	343	13,589	4,066	2,323

^{1/} Represents actual purchases. Volumes were not adjusted for purchases among similar types of buyers.

^{26/} This is the gross volume handled and includes sales among the wholesale meat distributors.

Wholesalers in Texas and Oklahoma were predominantly beef and calf handlers and performed little or no processing (table 41). Packer branch houses in Oklahoma handled about the same volume of beef as fresh and cured pork, but fresh and cured pork made up a substantial majority of the meat items sold by branch houses in Texas. Processors and packer branch houses in both states manufactured most of their fresh pork into smoked and cured items or sausage and variety meats in 1959 (table 41).

Table 41.--Texas and Oklahoma wholesale meat distributors and processors:
Percent of beef, calf, lamb and mutton, and fresh
pork transferred to processing

State and type of distributor or processor	Beef	Calf	Lamb and mutton	Fresh pork ^{1/}	Total fresh to processing
	Percent	Percent	Percent	Percent	Percent
<u>Texas:</u>					
Wholesalers.....	2/	--	--	2.5	.1
Packer branch houses.....	34.9	--	37.9	68.4	46.7
Processors.....	69.0	2.3	10.2	71.4	55.1
<u>Oklahoma:</u>					
Wholesalers.....	--	--	--	--	--
Packer branch houses.....	17.6	--	--	87.5	45.9
Processors.....	22.9	--	--	59.5	32.9

^{1/} Fresh meat, other than pork transferred to processing was manufactured into sausage and variety meats. Of the fresh pork transferred to processing, the following volumes were utilized for manufacturing smoked and cured items: Texas distributors--wholesalers 41 percent, branch houses 61 percent, processors 27 percent; Oklahoma distributors--branch houses 80 percent, processors 72 percent. The remaining fresh pork transferred to processing was used for preparing sausage and variety items.

^{2/} Less than .05 percent.

Quality of Meat Handled

More than 50 percent of the total beef, calf and lamb purchased by packer branch houses and wholesalers was estimated to be equivalent to U. S. Good or higher in quality (table 42). Meat handled by processors was mostly equivalent to U. S. Standard or lower in quality and was used principally for processing into sausage and variety meats. Wholesale meat distributors stated that much of their lower quality meat was sold to hamburger and chili establishments.

At least two-thirds or more of the beef, calf and lamb considered U. S. Good or higher in quality was marked or "rolled" with Federal grades (table 43). It is interesting to note that in Texas smaller percentages of the meat estimated to be U. S. Choice was eventually rolled with a Federal grade than was U. S. Good. As a general rule, high quality meat not rolled or marked with a Federal grade was marked with a packer or private label. Wholesalers, who generally do not employ private brands, had a high percentage of the beef, calf and veal estimated to be equivalent in quality to U. S. Good or higher marked with Federal grades

Table 42.--Texas and Oklahoma wholesale meat distributors and processors:
Estimated grade equivalent of dressed beef, calf and lamb purchased,
by type of distributor, 1959 1/

State and type of distributor or processor	U. S. Prime: and Choice:	U. S. Good	U. S. Standard	U. S. Commercial or lower	Total
	Percent	Percent	Percent	Percent	Percent
Texas:					
Packer branch houses.....	34.5	20.7	11.7	33.1	100.0
Wholesalers.....	18.6	31.8	17.6	32.0	100.0
Processors.....	5.2	20.7	30.6	43.5	100.0
All.....	19.9	27.6	15.5	37.0	100.0
Oklahoma:					
Packer branch houses.....	67.8	16.0	.7	15.5	100.0
Wholesalers.....	27.3	31.0	11.5	30.2	100.0
Processors.....	.7	15.3	13.6	70.4	100.0
All.....	24.2	22.5	10.4	42.9	100.0

1/ Data not available for quality, or grade equivalent of dressed beef, calf and lamb handled by brokers.

2/ U. S. grade equivalents estimated by packer branch houses, wholesalers, and processors.

Table 43.--Texas and Oklahoma wholesale meat distributors and processors:
Type of grading or marking, by kinds of meat, 1959 1/

Type of marketing by State	Fresh meat				
	Beef 2/	Calf and veal 2/	Lamb and mutton 2/	Fresh pork 3/	Other pork 3/4/
	Percent	Percent	Percent	Percent	Percent
Texas:					
U. S. graded.....	36.7	55.4	20.6	0	0
Packer graded.....	11.7	8.4	7.8	9.4	87.2
U. S. graded and packer branded.....	.3	.3	.1	0	0
Not graded or branded.....	51.3	35.9	71.6	90.6	12.8
Total.....	100.0	100.0	100.0	100.0	100.0
Oklahoma:					
U. S. graded.....	43.8	57.7	90.4	0	0
Packer branded.....	7.4	32.3	7.3	19.8	97.5
U. S. graded and packer branded.....	0	0	0	0	0
Not graded or branded.....	48.8	10.0	2.3	80.2	2.5
Total.....	100.0	100.0	100.0	100.0	100.0

1/ Data not available for meat handled by brokers.

2/ Represents total dressed meats purchased.

3/ Represents sales.

4/ Includes smoked and cured pork, and sausage, variety, and other.

(table 44). Packer branch houses in Texas relied on both the Federal grades and their private brands for disposing of higher quality meats. However, branch houses in Oklahoma used Federal grades more extensively than private brands in selling beef, calf and lamb.

Distributors' estimates indicate that about 45 percent of the total beef, calf and lamb sold, in both Texas and Oklahoma, was U. S. graded and about the same proportion was neither graded nor branded (table 45). 27/ The remaining meat was marked with a packer brand or private label. Most of the fresh pork was sold unbranded, but cured products were sold mostly with a packer brand or label.

Sources of Supply

The geographic supply sources of fresh meat and cured products purchased by wholesale meat distributors and processors in Texas and Oklahoma appears to be related to the type of operation and type of distributor. Operations of wholesalers and processors are primarily local in nature. They obtained the majority of their requirements from suppliers in the states in which they operate (table 46). Packer branch houses and brokers, whose buying and selling activities are less local in nature, acquired most of their meat and meat products from suppliers in states other than those in which they are headquartered. Most of the meat purchased from other states consisted of either fresh pork or cured products.

Packers were the primary suppliers of meat and meat products for wholesale meat distributors and processors. In Oklahoma, they purchased almost their entire supplies from packers whether in Oklahoma or in other states. Wholesale meat distributors and processors in Texas also purchased a substantial majority of their supplies from packers, but they also obtained some fresh meat and cured products from packer branch houses, wholesalers, and other types of suppliers.

Distribution Patterns

Sales by Geographic Area

With the exception of brokers, wholesale meat distributors and processors sold most of their meat within the state in which they were headquartered (table 47). Meat or meat products sold in other states was distributed throughout the United States and some distributors also sold their product in other countries.

Texas distributors relied on outlets principally within the metropolitan areas of Dallas-Fort Worth, San Antonio, and Houston (table 48). However, some distributors regularly shipped meat to buyers within a radius of 150 miles or more. Sales by Texas wholesale meat distributors and processors in Oklahoma were confined primarily to Oklahoma City and Tulsa. However, packer branch houses in Texas distributed no meat in Tulsa or Oklahoma City.

The geographic distribution of sales by wholesale meat distributors and processors in Oklahoma was similar to that of Texas distributors. Most of the meat sold in Oklahoma by Oklahoma distributors was sold to buyers within the metropolitan areas of Oklahoma City and Tulsa (table 48). This pattern of distribution, of course, varies among the different types of distributors. Meat shipped to Texas was sold to areas other than the metropolitan areas under consideration in this study.

27/ Estimates by firms of the proportion of their beef, calf, and lamb federally graded may be biased upwards according to estimates made by USDA grading officials.

Table 44.--Texas and Oklahoma wholesale meat distributors and processors:
Estimated proportions of fresh meat equivalent to U. S. Choice, Good, and
Standard, marked with Federal grades, by type of distributor, 1959 1/ 2/

State and type of distributor or processor	U. S. Choice	U. S. Good	U. S. Standard
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
<u>Texas:</u>			
Packer branch houses.....	44.4	58.4	5.3
Wholesalers.....	98.0	85.2	22.9
Processors.....	73.9	63.3	49.2
All.....	66.5	74.9	23.9
<u>Oklahoma:</u>			
Packer branch houses.....	89.1	70.7	100.0
Wholesalers.....	98.1	78.4	6.4
Processors.....	78.4	55.5	12.2
All.....	93.7	71.4	10.4

1/ Estimated by packer branch houses, wholesalers, and processors. Data not available for meat handled by brokers.

2/ Proportion of fresh meat equivalent to U. S. Choice, Good, and Standard is shown in table 43.

Table 45.--Texas and Oklahoma wholesale meat distributors and processors:
Estimated proportions of each type of grading or marking, by type of
distributor, for total beef, calf, and lamb handled, 1959 1/

State and type of distributor or processor	U. S. graded	Packer branded	U.S. graded & packer branded	Not graded or branded	Total
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
<u>Texas:</u>					
Packer branch houses.....	31.1	47.0	0	21.9	100.0
Wholesalers.....	48.9	1.6	.4	49.1	100.0
Processors.....	32.4	5.1	0	62.5	100.0
All.....	43.6	12.0	.3	44.1	100.0
<u>Oklahoma:</u>					
Packer branch houses.....	72.2	12.3	0	15.5	100.0
Wholesalers.....	53.3	8.6	0	38.1	100.0
Processors.....	24.8	11.0	0	64.2	100.0
All.....	45.8	10.1	0	44.1	100.0

1/ Data not available by type of grading or marking for meats handled by brokers.

Table 46.--Texas and Oklahoma wholesale meat distributors and processors:
Geographic origin of dressed meat purchases, by type of distributor,
and supplier type, by area of purchase, 1959

Item	Packer branch houses	Wholesalers	Processors	Brokers
	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds
Purchases by Texas firms:.....	172,566	205,680	38,255	89,384
Geographic origin:	Percent	Percent	Percent	Percent
Texas.....	34.3	77.9	80.5	37.0
Oklahoma.....	.2	.3	.1	9.0
Kansas.....	4.2	1.2	2.6	2.2
Other states.....	61.3	20.6	16.8	51.8
Total.....	100.0	100.0	100.0	100.0
Supplier type:				
Purchases in Texas:				
Packers.....	86.6	96.6	83.8	100.0
Packer branch houses.....	2.5	2.5	7.8	0
Other wholesale distributors.....	2.2	.4	0	0
Other.....	8.7	.5	8.4	0
Total.....	100.0	100.0	100.0	100.0
Purchases in other states:				
Packers.....	99.8	91.2	78.2	87.2
Packer branch houses.....	0	5.5	3.5	0
Other wholesale distributors.....	.2	1.4	0	12.4
Other.....	0	1.9	18.3	.4
Total.....	100.0	100.0	100.0	100.0
	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds
Purchases by Oklahoma firms:....	13,065	25,536	21,569	1/
Geographic origin:	Percent	Percent	Percent	Percent
Texas.....	2.2	9.7	1.8	1/
Oklahoma.....	11.0	60.0	93.0	1/
Kansas.....	56.2	19.4	2.3	1/
Other states.....	30.6	10.9	2.9	1/
Total.....	100.0	100.0	100.0	
Supplier type:				
Purchases in Oklahoma:				
Packers.....	100.0	99.8	100.0	1/
Packer branch houses.....	0	0	0	1/
Other wholesale distributors.....	0	.2	0	1/
Other.....	0	0	0	1/
Total.....	100.0	100.0	100.0	
Purchases in other states:				
Packers.....	100.0	100.0	100.0	1/
Packer branch houses.....	0	0	0	1/
Other wholesale distributors.....	0	0	0	1/
Other.....	0	0	0	1/
Total.....	100.0	100.0	100.0	

1/ No data were obtained from brokers in Oklahoma.

Table 47--Texas and Oklahoma wholesale meat distributors and processors:
Volume of meat sales, by type of distributor, and distribution
of sales by geographic area, 1959

Item	Packer branch houses	Wholesalers	Processors	Brokers	Total
	1,000 <u>pounds</u>	1,000 <u>pounds</u>	1,000 <u>pounds</u>	1,000 <u>pounds</u>	1,000 <u>pounds</u>
<u>Volume of sales:</u>					
Texas wholesale meat distributors.....	172,566	205,680	38,255	89,384	505,885
Oklahoma wholesale distributors.....	13,065	25,536	21,569	<u>1/</u>	60,170
<u>Sales distribution by geographic area:</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
<u>Texas wholesale meat distributors:</u>					
Texas.....	96.1	72.7	87.4	44.0	76.8
Oklahoma.....	1.5	.4	.6	5.9	1.7
Other states.....	2.4	26.9	12.0	50.1	21.5
Total.....	100.0	100.0	100.0	100.0	100.0
<u>Oklahoma wholesale meat distributors:</u>					
Texas.....	0	4.0	4.0	<u>1/</u>	3.1
Oklahoma.....	100.0	90.0	94.2	<u>1/</u>	93.7
Other states.....	0	6.0	1.8	<u>1/</u>	3.2
Total.....	100.0	100.0	100.0		100.0

1/ No data were obtained from brokers in Oklahoma.

Sales by Buyer Type

Retail establishments were the most important outlets for wholesale meat distributors and processors in both Texas and Oklahoma in 1959 (table 49). There were some differences among the distributors relative to their primary outlet. Packer branch houses in both States were dependent mostly on retail establishments. This was also true of wholesalers in Oklahoma and of processors in Texas. However, wholesalers in Texas were not dependent on any one outlet. Processors in Oklahoma relied principally on retailers and hotels, restaurants, and institutions as purchasers for their products. No data were obtained from brokers in Oklahoma, but brokers in Texas served primarily as buying agents for processors and wholesalers.

Sales to retailers by Texas wholesale meat distributors and processors were divided about equally among retail chains and independent retailers (table 50). Wholesalers and brokers were more dependent on chain establishments for retail sales than packer branch houses and processors who sold principally to independent retailers. In Oklahoma, independent retailers purchased the majority of the meat sold to retailers by wholesalers, branch houses and processors.

Table 48.--Texas and Oklahoma wholesale meat distributors and processors:
Distribution of sales in Texas and Oklahoma, by type of distributor, 1959

Sales distribution	Packer branch houses	Wholesalers	Processors	Brokers	Total
	Percent	Percent	Percent	Percent	Percent
<u>Texas distributors and processors</u>					
<u>Distribution in Texas:</u>					
Dallas-Fort Worth:	9.2	20.6	49.2	58.5	22.0
San Antonio	10.2	15.9	11.1	22.7	13.7
Houston	34.3	37.2	23.5	6.7	31.7
Other Texas	46.3	26.3	16.2	12.1	32.6
Total	100.0	100.0	100.0	100.0	100.0
<u>Distribution in Oklahoma:</u>					
Oklahoma City	0	37.5	50.0	99.2	63.8
Tulsa	0	0	50.0	.8	1.8
Other Oklahoma	100.0	62.5	0	0	34.4
Total	100.0	100.0	100.0	100.0	100.0
<u>Oklahoma distributors and processors</u>					
<u>Distribution in Oklahoma:</u>					
Oklahoma City	0	25.1	58.0	1/	31.2
Tulsa	62.4	33.5	29.9	1/	38.8
Other Oklahoma	37.6	41.4	12.1	1/	30.0
Total	100.0	100.0	100.0		100.0
<u>Distribution in Texas:</u>					
Dallas-Fort Worth:	0	0	0	1/	0
San Antonio	0	0	0	1/	0
Houston	0	0	0	1/	0
Other Texas	0	100.0	0	1/	100.0
Total	0	100.0	0		100.0

1/ No data were obtained from brokers in Oklahoma.

SOUTHERN PLAINS MEAT RETAILING OPERATIONS

In Oklahoma, information was obtained on 1959 meat retailing operations of all retail grocery firms with 4 or more stores and centralized meat buying. The same information was obtained from about 85 percent of such firms in Texas. Voluntary and cooperative groups were included if they purchased meats for affiliated independent retailers.

Table 49--Texas and Oklahoma wholesale meat distributors and processors:
Distribution of sales by type of buyer and type of distributor, 1959

Sales by state and type of buyer	Packer branch houses	Wholesalers	Processors	Brokers	Total
	Percent	Percent	Percent	Percent	Percent
<u>Texas:</u>					
Consumers.....	0	2.2	2.3	0	1.1
Retailers.....	81.7	30.4	52.4	7.6	45.5
Hotels, restaurants, and institutions.....	9.9	23.8	28.3	0	15.2
Government agencies.....	2.7	14.3	1.3	0	6.8
Wholesale distributors.....	5.0	8.0	15.7	31.7	11.8
Processors.....	.7	21.1	0	60.7	19.8
Others.....	0	.2	0	0	.1
Total.....	100.0	100.0	100.0	100.0	100.0
<u>Oklahoma:</u>					
Consumers.....	0	2.6	3.1	2/	2.2
Retailers.....	80.8	55.6	32.0	2/	52.6
Hotels, restaurants, and institutions.....	8.4	33.0	40.8	2/	30.5
Government agencies.....	3.8	0	0	2/	.8
Wholesale distributors.....	5.8	8.8	6.5	2/	7.3
Processors.....	.7	1/	17.6	2/	6.5
Others.....	.5	0	0	2/	.1
Total.....	100.0	100.0	100.0		100.0

1/ Less than .05 percent.

2/ No data were obtained from brokers in Oklahoma.

Table 50--Texas and Oklahoma wholesale meat distributors and processors:
Distribution of retail sales among retail chains
and independent retailers

Sales to chains and independent retailers	Packer branch houses	Wholesalers	Processors	Brokers
	Percent	Percent	Percent	Percent
<u>Texas wholesale meat distributors:</u>				
Retail chains.....	46.8	58.0	35.9	79.3
Independent retailers.....	53.2	42.0	64.1	20.7
Total.....	100.0	100.0	100.0	100.0
<u>Oklahoma wholesale meat distributors:</u>				
Retail chains.....	35.9	27.1	41.9	1/
Independent retailers.....	64.1	72.9	58.1	1/
Total.....	100.0	100.0	100.0	

1/ No data obtained from brokers.

General Policies and Operating Procedures of Retail Food Chains

Most retail food chains in Texas and Oklahoma have rigid specifications regarding the quality, weight, and type of beef, calf, and lamb handled. These specific requirements vary according to the location and retail organization.

The majority of the chains organized their meat program around the beef operations. However, one chain specialized primarily in calf and veal. Two chains engaged in cattle feeding in 1959, and another stated that a packer bought and fed cattle according to their specifications. Most of the chains preferred not to feed cattle because of the risk and capital requirements. Two chains owned and operated slaughtering facilities.

Several chains participated in packer insert programs. Under this program, the packer's label is inserted in the meat package by the retail butcher. Insert programs were favored by some chains because they felt the packer would have a stronger incentive to deliver consistent quality meat. Advantages to the packer include the opportunity to have their brand reach consumers on store-packaged meat and also some assurance that the retailer will reorder beef from the same packer. Packers providing this service often purchased livestock and slaughtered the cattle according to the requirements of a specific retailer. Some chains stated that they purchased all their beef requirements from one packer under this program, while other chains only purchased the bulk of their supplies from the packer providing the insert program.

Only two chains owned central storage facilities, but several firms were planning to add these facilities to improve efficiency in purchasing, aging, and distribution of meat and meat products. Although most chains have no central meat warehousing, storage facilities and cutting rooms are available at individual stores. With the exception of the chains owning central storage facilities, packers make deliveries direct to individual stores.

Buying Policies and Procedures

Most chains in Texas and Oklahoma centered their beef program on low Choice or top Good quality beef carcasses weighing from 450 to 650 pounds. The quality of the calf meat purchased was primarily in the Good range, while lamb and mutton was predominantly Choice. Chain meat buyers specified the weight range and quality of carcass to be delivered to the respective stores. Carcasses not meeting the desired specifications were rejected upon delivery to individual stores.

The larger proportion of the chains relied on 3 to 5 suppliers for their meat requirements, although a few chains bought all their beef from one large supplier. In all instances, chains stated that reputation and ability to consistently supply the desired quality and quantity of meats at quoted prices were the prime considerations in selecting a supplier.

The proportion of its meat purchased by a chain from its several suppliers varied from week to week. Each week, packers provide chains with a price list for the following week. Meat supervisors of the chains obtain estimates from meat managers of the quality and quantities of meat required and place orders with the packers quoting the lowest or "best" price, for delivery on specified dates.

Meat supervisors of some chains make daily visits to each store in their organization and assist store managers in establishing prices and maintaining inventories of meat. A few chains stated that they attempted to maintain only quality meats in stores located in high income areas, and economy meat in stores located in lower income neighborhoods.

Pricing Policies

Chains interviewed in Texas and Oklahoma used two general methods for establishing prices. They were (1) a set "mark-up" above cost, and (2) a maximum and minimum mark-up range in which store managers were expected to operate. Estimates of mark-ups required by chains for profitable meat operations varied from about 18 to 25 percent. The lower estimate represents the break-even borderline while higher mark-ups were associated with the better quality meat offered for sale.

Volume and Source of Supply of Meat Handled by Texas and Oklahoma Retail Grocery Stores

Volume of Meat and Meat Products Handled

Retail food chains interviewed in Texas handled 309 million pounds of fresh meat and cured meat products in 1959 (table 51). In Oklahoma, retail food chains handled or sold 79 million pounds of meat (table 52).

Beef, calf and veal made up just over half the total meat and meat products sold by the sampled chains. Calf or "baby beef" alone accounted for 23 percent of the Texas total. ^{28/} Lamb and mutton was relatively unimportant. Fresh pork, smoked and cured pork, and sausage and variety meats, consequently, accounted for most of the remaining meat sold. Smoked and cured pork was the largest component of the latter group, accounting for 47 percent of the pork items sold in Texas and about 41 percent in Oklahoma in 1959.

Source of Supply

Texas retail food chains.--In 1959, Texas retail food chains purchased 83 percent of their meat products from suppliers in Texas (table 51). Most of the out-of-state purchases consisted of fresh pork or pork products which were obtained principally from suppliers in the corn belt. In-shipments of beef and lamb originated from suppliers in the North Central Region and Colorado.

Large volume retailers prefer to buy from suppliers who deal in relatively large lots and can supply the volume and quality desired. Consequently, packers and packer branch houses supplied 97 percent of the total meat handled by Texas retail food chains in 1959 (table 53).

Oklahoma retail food chains.--Oklahoma retail food chains bought 58 percent of their meat from Oklahoma suppliers and another 25 percent from suppliers in Kansas in 1959 (table 52). Most of the remaining meat originated in the Corn Belt.

^{28/} "Baby beef" is derived from carcasses weighing from 225 to 300 pounds. This item is preferred to mature beef by many consumers in Texas and is also sold by various chains in Oklahoma.

Table 51--Sampled Texas retail food chains: Meat purchases by kinds, geographic origin and type of supplier, 1959

Item	Beef	Calf and veal	Lamb and mutton	Fresh pork	Smoked and cured pork	Sausage, variety and others:	Total
	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds
Purchases 1/.....	96,116	70,305	4,279	33,975	64,534	39,996	309,205
Geographic origin of purchases:	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Texas.....	79.3	98.6	91.3	81.1	78.7	72.8	83.1
Oklahoma.....	.3	.2	0	1.4	1.5	2/	.6
Kansas.....	2.8	0	.2	2.6	2.6	2.6	2.1
Other.....	7.6	1.2	8.5	14.9	17.2	24.6	14.2
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Type of supplier:							
Purchases in Texas:							
Packer.....	78.4	98.2	80.1	95.6	79.3	80.1	86.0
Packer branch houses.....	18.7	1.2	19.9	2.9	20.6	19.8	12.8
Wholesale distributor.....	2.9	.4	0	1.5	.1	.2	1.2
Other.....	0	.2	0	0	2/	0	1/
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Purchases in other States:							
Packer.....	100.0	100.0	0	97.0	58.1	99.2	87.8
Packer branch house.....	0	0	100.0	3.0	3.7	.8	2.2
Wholesale distributor.....	0	0	0	0	0	0	0
Other.....	0	0	0	0	38.2	0	10.0
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0

1/ Of chains in sample.

2/ Less than .05 percent.

Table 52--Sampled Oklahoma retail food chains: Meat purchases by kinds, geographic origin and type of supplier, 1959

Item	Beef	Calf and veal	Lamb and mutton	Fresh pork	Smoked and cured pork	Sausage, variety and others:	Total
	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds
Purchases	31,474	8,888	501	14,603	15,357	7,902	78,725
Geographic origin of purchases:	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Texas.....	1.2	5.8	0	0	0	.3	1.2
Oklahoma.....	50.0	94.2	56.1	63.0	59.0	33.1	57.5
Kansas.....	22.7	0	16.8	28.3	22.9	63.6	25.2
Other.....	26.1	0	27.1	8.7	18.1	3.0	16.1
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Type of supplier:							
Purchases in Oklahoma:							
Packer.....	79.2	98.5	45.8	87.3	65.5	69.9	80.9
Packer branch houses.....	20.0	1.5	54.2	12.7	34.5	13.2	17.8
Wholesale distributor.....	.8	0	0	0	0	0	.3
Other.....	0	0	0	0	0	16.9	1.0
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Purchases in other States							
Packer.....	94.3	100.0	100.0	100.0	100.0	25.9	85.6
Packer branch house.....	0	0	0	0	0	0	0
Wholesale distributor.....	5.7	0	0	0	0	0	2.7
Others.....	0	0	0	0	0	74.1	11.7
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 53--Texas and Oklahoma retail food chains: Quality or U. S. grade equivalent, of dressed beef, calf, and lamb purchased, 1959 ^{1/}

Item	U. S. Prime and Choice	U. S. Good	U. S. Standard	U. S. Commercial or lower	Total
	Percent	Percent	Percent	Percent	Percent
<u>Texas chains:</u>					
Beef.....	65.5	23.7	5.1	5.7	100.0
Calf and veal.....	2.8	65.6	30.2	1.4	100.0
Lamb and mutton.....	96.7	3.3	^{2/}	0	100.0
<u>Oklahoma chains:</u>					
Beef.....	62.9	25.8	2.2	9.1	100.0
Calf and veal.....	2.4	52.9	44.7	0	100.0
Lamb and mutton.....	100.0	0	0	0	100.0

^{1/} Quality of meat, comparable to USDA Grade standards, but not necessarily USDA graded or rolled. Grades were estimated by retailers.

^{2/} Less than 0.05 percent.

Packers and packer branch houses also furnished about 93 percent of the total meat handled by Oklahoma chains in 1959. Packers, alone, supplied 83 percent of the total meat requirement of Oklahoma chains. Wholesalers were unimportant as a source of supply for retail chain purchases either in Oklahoma or from other States. "Others," which includes processors and brokers were the principal sources for sausage and variety meats.

Quality, Type of Grading, and Form of Dressed Purchases

Quality of Meat Handled

Almost two-thirds of the dressed beef purchased by Texas and Oklahoma retail food chains in 1959 was estimated to be equivalent to U. S. Choice or higher in quality (table 53). Most of the remaining beef handled was estimated to be equivalent to U. S. Good. Beef in the U. S. Standard or lower category was used mostly as economy beef or for hamburger and variety meats. Most calf and veal was estimated to be either U. S. Good or U. S. Standard. Lamb and mutton was predominantly U. S. Choice or higher in quality.

At least 92 percent, of the beef, calf and veal, lamb and mutton estimated by Oklahoma retail chains to be equivalent in quality to U. S. Good or higher were marked with Federal grades (table 54). In Texas, not more than 75 percent of the beef estimated to be U. S. Choice in quality was actually rolled with Federal grades. For most of the other kinds of meat, depending on the grade, smaller percentages were graded or rolled with Federal grades.

Many chains preferred to use packer brands or their own private label on meat estimated to be U. S. Good or higher in quality (table 55). Some chains also marked

Table 54--Texas and Oklahoma retail food chains: Proportion of fresh meat equivalent to U. S. Choice, Good, and Standard, actually marked with Federal grades, 1959 ^{1/}

Item	U. S. Choice	U. S. Good	U. S. Standard
	Percent	Percent	Percent
<u>Texas chains:</u>			
Beef.....	74.7	35.6	75.4
Calf and veal.....	35.1	71.5	48.7
Lamb and mutton.....	45.0	22.2	<u>2/</u>
<u>Oklahoma chains:</u>			
Beef.....	91.8	91.8	0
Calf and veal.....	100.0	99.5	87.9
Lamb and mutton.....	100.0	0	0

^{1/} Proportion of fresh meat equivalent to U. S. Choice, Good, and Standard is shown in Table 53.

^{2/} Less than .05 percent.

Table 55--Texas and Oklahoma retail food chains: Type of grading or marking, by kinds of meat, 1959

Type of marking	Fresh Meat					Other pork ^{1/}
	Beef	Calf and veal	Lamb and mutton	Fresh pork		
	Percent	Percent	Percent	Percent	Percent	
<u>Texas chains:</u>						
U. S. graded.....	63.2	63.8	42.7	0	0	
Packer branded.....	26.6	31.8	54.7	15.6	58.1	
U. S. graded and packer branded.....	0	0	0	0	0	
Not graded or branded..	10.2	4.4	2.6	84.4	41.9	
Total.....	100.0	100.0	100.0	100.0	100.0	
<u>Oklahoma chains:</u>						
U. S. graded.....	83.0	100.0	91.6	0	0	
Packer branded.....	2.5	0	8.4	0	100.0	
U. S. graded and packer branded.....	0	0	0	0	0	
Not graded or branded..	14.5	0	0	100.0	0	
Total.....	100.0	100.0	100.0	100.0	100.0	

^{1/} Other pork includes smoked and cured pork, and sausage and variety meats.

meat equivalent to U. S. Standard, but not federally graded or rolled, with their private labels. U. S. grade standards are not used in buying or selling pork, consequently, these items were sold under a private label or ungraded. Fresh pork handled by chains in both Texas and Oklahoma was primarily unbranded, but most of the smoked and cured pork, and sausage and variety items were either packer branded or carried a private label.

Form of Meat Bought and Sold

Beef, calf and veal, and lamb and mutton were delivered to chain stores primarily in carcass form as compared to fresh pork which was delivered mostly in wholesale cuts (table 56). Almost all of the fresh meat sales of Texas and Oklahoma retail chains were made in the form of retail cuts (table 57). Fresh meat which was not sold in the form of retail cuts, was generally sold as home freezer or locker meat. Most of the chains stated that these sales were made to accommodate customers and to create good public relations.

Sales and Distribution Patterns of Retail Food Chains

Texas Retail Food Chains

About 98 percent of the total meat handled by Texas retail chains was sold through their stores in Texas (table 58). The remaining meat or meat products were sold through stores owned by Texas chains, but located in Oklahoma, Louisiana, or New Mexico.

Retail chain stores located in Dallas-Fort Worth, San Antonio, and Houston accounted for more than 50 percent of the total meat sold by retail food chains in Texas (table 58). The Dallas-Fort Worth area accounted for a large proportion of the meat sold in the metropolitan areas and was followed by Houston and San Antonio in percentage sales.

Oklahoma Retail Food Chains

In 1959, almost 97 percent of the total meat handled by Oklahoma retail food chains moved through stores located in Oklahoma (table 58). All of the remaining meat was distributed to stores owned or controlled by Oklahoma chain organizations but located in Texas. Most of the meat and meat products sold by Oklahoma retail food chains in Oklahoma was sold in areas other than Oklahoma City or Tulsa.

SUMMARY OF FINDINGS AND EVALUATION OF FACTORS AFFECTING INDUSTRY STRUCTURE

Substantial change has taken place in the market structure of grocery retailing and livestock production in the Southern Plains. Changes at the packer and wholesale levels are less apparent.

The Retailing Industry

The structure of the retailing industry is characterized by the growth of large-volume retailers who are accounting for a greater proportion of the grocery sales

Table 56--Texas and Oklahoma retail food chains: Form of meat purchases,
by kinds of meat, 1959

Form of meat purchases	Beef	Calf and veal	Lamb and mutton	Fresh pork
	Percent	Percent	Percent	Percent
<u>Texas chains:</u>				
Carcasses.....	68.8	80.6	89.1	3.6
Quarters.....	6.2	13.0	1.9	0
Other:				
Primal cuts.....	24.9	5.9	9.0	76.2
Retail cuts.....	.1	.5	0	20.2
Total.....	100.0	100.0	100.0	100.0
<u>Oklahoma chains:</u>				
Carcasses.....	74.6	83.7	82.5	0
Quarters.....	5.3	16.3	0	0
Other:				
Primal cuts.....	12.7	0	17.5	99.6
Retail cuts.....	7.4	0	0	.4
Total.....	100.0	100.0	100.0	100.0

Table 57--Texas and Oklahoma retail food chains: Form of meat sales, by kinds
of meat, 1959

Form of meat sales	Beef	Calf and veal	Lamb and mutton	Fresh pork
	Percent	Percent	Percent	Percent
<u>Texas chains:</u>				
Carcasses.....	3.1	7.4	1.1	0
Quarters.....	2.1	2.3	0	0
Other:				
Primal cuts.....	2.8	1.7	.1	7.0
Retail cuts.....	92.0	88.6	98.8	93.0
Total.....	100.0	100.0	100.0	100.0
<u>Oklahoma chains:</u>				
Carcasses.....	1.3	.9	0	0
Quarters.....	.2	.8	0	0
Other:				
Primal cuts.....	0	0	0	0
Retail cuts.....	98.5	98.3	100.0	100.0
Total.....	100.0	100.0	100.0	100.0

Table 58--Texas and Oklahoma retail food chains: Distribution of sales
by geographic area outside and within the State, 1959

Item	Beef	Calf and veal	Lamb and mutton	Fresh pork	Smoked and cured: pork	Sausage, variety and others
	Percent	Percent	Percent	Percent	Percent	Percent
<u>Sales of</u>						
<u>Texas chains:</u>						
In Texas.....	98.1	98.6	98.5	98.2	97.7	98.3
In Oklahoma.....	^{1/}	.2	.1	.2	.2	.1
In other states.....	1.9	1.2	1.4	1.6	2.1	1.6
Total.....	100.0	100.0	100.0	100.0	100.0	100.0
<u>Distribution of</u>						
<u>sales within Texas</u>						
Dallas-Fort Worth...	28.5	38.3	22.3	32.3	35.5	35.0
Houston.....	23.7	21.0	31.9	13.9	13.0	14.9
San Antonio.....	5.9	6.2	15.6	7.5	5.1	4.7
Other Texas.....	41.9	34.5	30.2	46.3	46.4	45.4
Total.....	100.0	100.0	100.0	100.0	100.0	100.0
<u>Sales of</u>						
<u>Oklahoma chains:</u>						
In Texas.....	3.7	7.7	4.2	3.2	.6	1.2
In Oklahoma.....	96.3	92.3	95.8	96.8	99.4	98.8
Total.....	100.0	100.0	100.0	100.0	100.0	100.0
<u>Distribution of sales</u>						
<u>within Oklahoma</u>						
Oklahoma City.....	15.0	29.1	19.6	16.2	14.9	13.7
Tulsa.....	29.4	17.4	39.8	26.3	23.8	26.1
Other Oklahoma.....	55.6	53.5	40.6	57.5	61.3	60.2
Total.....	100.0	100.0	100.0	100.0	100.0	100.0

^{1/} Less than .05 percent.

within the Southern Plains. The upsurge of large-volume retailing has resulted partly from changes in the number, location, income and buying habits of the population. Changes in the buying habits of consumers, conversely, may also be a result of the changing market structure. Technological and organizational innovations such as improvements in transportation, storage and in-transit refrigeration, self-service and other advanced merchandising techniques have given consumers new services and new economies in food distribution.

Dramatic changes occurred during the 1948-58 period when grocery store numbers dropped 27 percent in Texas and about 40 percent in Oklahoma. Total deflated sales of retailers, in contrast, rose 65 percent in Texas and 51 percent in Oklahoma. Stores with sales of one million dollars annually accounted for about 39 percent of the total sales in Texas in 1958. In Oklahoma, stores with sales of \$500 thousand

or more made 53 percent of the total sales.^{29/} The number of retail stores will probably continue to decrease, while sales volume of grocery retailers, especially larger volume stores, may increase substantially.

Continued increases in the number of affiliated retailers relative to independent retailers were observed in both Texas and Oklahoma. In addition, cooperative and voluntary group retailers are developing centralized meat buying programs for their members. This represents efforts of independent retailers to achieve economies in buying and advertising enjoyed by large volume retailing firms. Numbers of fully independent retailers are declining throughout the Southern Plains.

The significance of these developments to the meat industry stems from changes in buying practices and product requirements normally associated with the shift to large-volume retailing. Competition among retailers for the patronage of discriminating consumers requires exacting attention to quality requirements on meat. Guarantees of satisfaction on meat sold by retailers have become essential and these require quality control, detailed specifications for use in buying, and rigid adherence to these specifications. The larger retailer is particularly interested in a dependable supplier of standardized and uniform quality meat products that can be purchased along with specified services at competitive prices. This usually requires a relatively large specialized supplier located in an area where raw product materials of uniform quality can be obtained at minimum cost. Suppliers in areas which cannot or do not meet the exacting requirements of the larger volume retailers may find it increasingly difficult to market their product.

The Livestock and Feedlot Industry

The Southern Plains, which has abundant basic resources required for livestock production, has been and is mainly a producer and marketer of raw materials for processing and consumption elsewhere rather than a processor or consumer of finished products. Cow-calf operations and range sheep production are the principal livestock enterprises. The Southern Plains annually produces large numbers of stocker-feeder cattle and lambs and ships many of these animals to other areas for additional feeding and slaughter. This probably will remain the principal function of the Southern Plains livestock industry. Hog production in the area has dropped since the post war period and is inadequate to meet slaughter requirements.

Potential exists for the growth of commercial feedlots in the Southern Plains. In-shipments accounted for about one-fourth of Texas' fed beef consumption, and for about one-third of Oklahoma's in 1959. Fed cattle production in both States has increased rapidly, and feed and other resources are sufficient for further growth. Feedlot production of beef in the Southern Plains will, however, face some problems as it grows. Among these will be the procurement costs of retailers in dealing with small local packers and problems of uniformity in quality and quantity of beef supplied.

The Packer and Wholesaler Industries

The present structure of the meatpacking and wholesaling industries in the Southern Plains is characterized by large numbers of relatively small firms. These firms grew out of economic circumstances in which this type of structure was most appropriate. In the rural economy of the Southern Plains, as it existed during the 1920's

^{29/} Data were not available for stores with sales of one million dollars annually.

and 1930's, nearly all of the many retail markets were small, transportation was slower and less efficient, and there were technical limitations to the in-transit storage of meat. Under these circumstances, locally oriented meat firms probably represented the most feasible means of providing needed supplies of meat.

The growth of large-volume retailers during recent years, however, has affected the comparative economic positions of certain types and sizes of plants. Small butcher-type slaughtering and small processing establishments have been replaced by larger plants as principal suppliers of large-volume retailing organizations. However, many small slaughtering firms have been able to survive, in some cases because of the locker plant facilities which they provide for many small communities.

Although most of the slaughtering firms in the Southern Plains are relatively small-volume, multi-species plants, the majority of the slaughter is accounted for by a small number of relatively large packers. The majority of the larger slaughter plants and wholesale meat distributors are located at or near the more populous cities while the smaller slaughterers and grocery store butchers are widely dispersed among the many small communities and towns.

The future growth and potential of the Southern Plains slaughtering and wholesaling industry is dependent upon the industry's ability to compete locally and in distant markets with slaughterers and distributors from other areas. Ability to compete will be dependent to a large extent, on relative supplies and prices of slaughter livestock, and comparative costs of slaughtering, processing and transporting the livestock and meat products. 30/

Federally inspected slaughtering facilities also is a prerequisite for trading in interstate commerce. Most of the small slaughtering plants in the region could not qualify for Federal inspection without expensive remodeling.

In 1959, Southern Plains packers obtained most of their total livestock and meat requirements, almost 90 percent, from sources within Texas and Oklahoma. Smaller quantities of hogs and pork products, however, originated from within the Southern Plains. Approximately 80 percent of the meat handled by Texas and Oklahoma packers was sold within the Southern Plains. Most of these out-shipments were either lamb or cow beef. Packer branch houses conducted much of their buying and selling activities in other areas, but most of the meat purchases and nearly all of the sales by wholesale meat distributors were confined to the Southern Plains area.

The Southern Plains is a relatively strong surplus producer of lamb and cow beef. The excess quantities move out of the area either in live or dressed form. Per capita consumption of lamb is low in both the North Central Region and the South as well as the Southern Plains. Consequently, most of the dressed lamb is shipped to markets in the Northeast. Shipments of cow beef are more widely distributed throughout the country. Cow beef often is more economical to ship longer distances since much of this product is boned out prior to shipment.

Implications of Changes for Meatpackers and Distributors

It is clear from the preceding discussion that (1) rapidly moving changes are taking place in the food retailing industry in Texas and Oklahoma, (2) structural

30/ An analysis of comparative costs and competitive potentials will be available in a later publication.

changes also have appeared at the producer level in the form of commercial cattle feedlots and a growing livestock industry, (3) technological improvements in transportation, refrigeration, and communication make it possible for meatpackers in other regions to actively compete with those in Texas and Oklahoma, and (4) changes in buying methods of retailers have tended to focus attention upon the larger specialized "shipper type" suppliers. Whereas many Southern Plains packers are small-volume locally oriented firms unable to compete outside their own State because they are not federally inspected.

Impacts of the above forces likely have been felt by the Southern Plains meatpacking industry and the effects may intensify during the next several years. Many small-volume packers are finding it increasingly difficult to compete with large-volume suppliers.

Marked changes may be required. A downward adjustment in numbers, and increases in average volume of meatpacking plants in the Southern Plains appear likely. Markets for small, diversified and locally oriented packers are rapidly declining. More medium or large-volume, federally inspected, more highly specialized and lower-cost plants may be required in the future. Such firms might be in a better position to meet the exacting requirements of many large volume retailers in Texas and Oklahoma and also be able to compete actively with packers and meat suppliers in other areas.

Southern Plains packers and processors enjoy some competitive advantages. These arise, primarily, from (1) proximity to local consumer outlets, (2) an intimate knowledge of local tastes, preferences, and consumption requirements, (3) ability to design products and services to meet the requirements of some local retail outlets, (4) nonunionization of most plants permitting greater flexibility in the use of labor, (5) a lower average level of wages, and (6) some restrictions on interstate shippers arising from Federal inspection requirements.

There are other forces that may work to the disadvantage of Southern Plains packers: (1) transportation rates on dressed meat relative to those on slaughter livestock may continue to decline, (2) labor unions are becoming a more important factor in Southern Plains meatpacking and processing plants while family labor is becoming less important. Any mergers or plant construction which tends to increase average size and volume of the plants in the region would probably tend to hasten unionization, reduce flexibility in the use of labor, and increase labor costs.

Numbers and sales of packinghouse branches in the Southern Plains may continue to decline. They are likely to continue their emphasis upon fresh and cured pork and processed products. Meat wholesalers handle considerable volumes of meat in Texas, but are relatively unimportant in the overall structure of the industry in Oklahoma. Meatpackers and processors historically have assumed responsibility for the wholesaling function.

Few large-volume beef wholesalers of the type generally referred to as "breakers" are found in the Southern Plains. These firms are more characteristic of beef deficit areas. Whether or not breakers become more important in the region may depend upon the future surplus-deficit position of the region for fed beef, as well as upon retailer demand for cuts, and competition offered by local packers in performing the breaking function.

The volume of food eaten outside the home in commercial and institutional feeding establishments likely will rise as population and incomes rise. This, in turn, could increase the importance of specialized hotel and restaurant wholesalers. The importance of wholesalers catering to the needs of small-volume retailers, however, probably will fall.